

GOVERNMENT OF INDIA

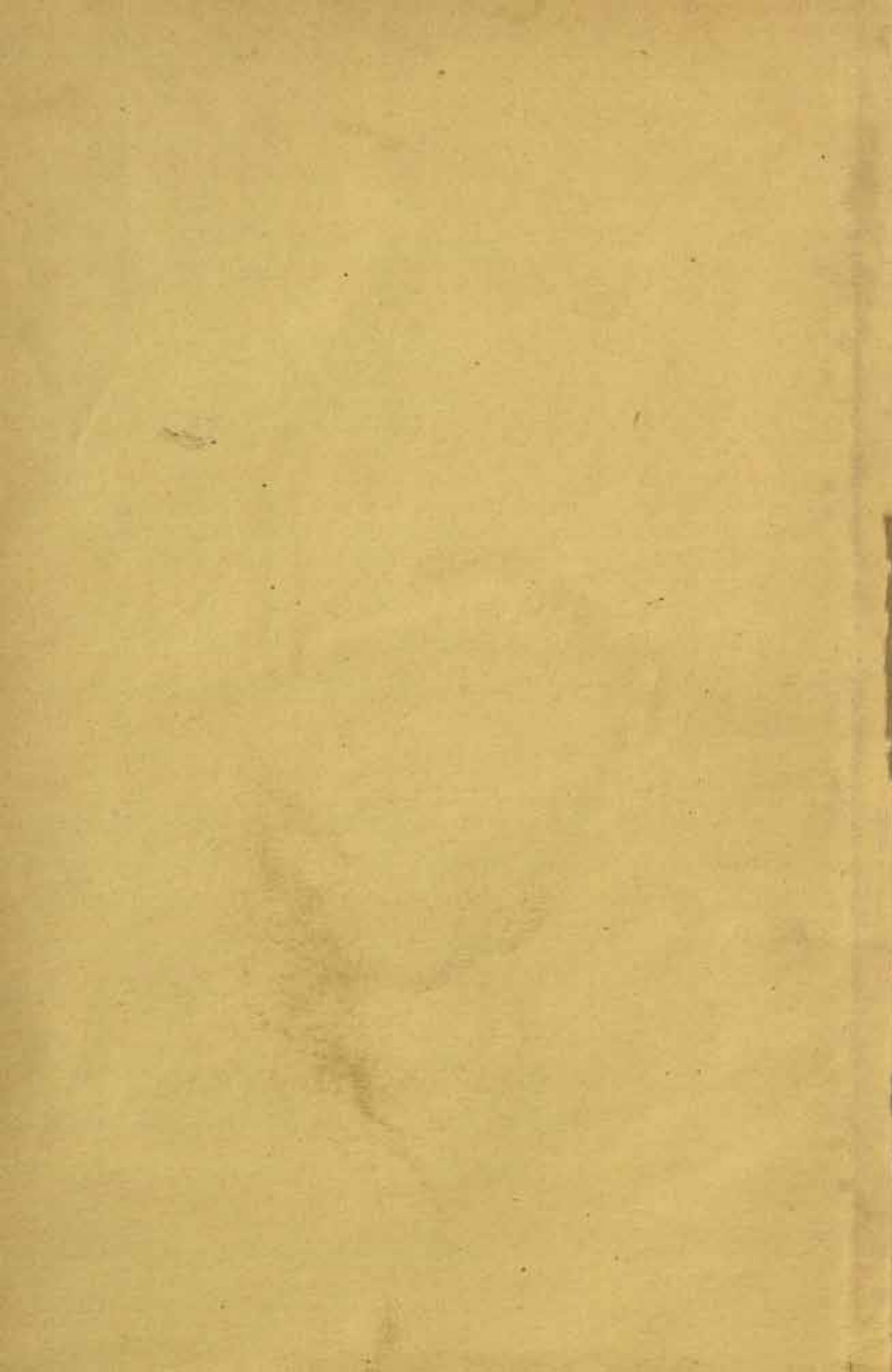
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THE JOURNAL

OF THE

ROYAL ANTHROPOLOGICAL INSTITUTE

OF

16820

GREAT BRITAIN AND IRELAND.



VOL. XLVIII.

572.05

J.R.A.I.

PUBLISHED BY THE

Royal Anthropological Institute of Great Britain and Ireland,

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NOTICE.

For convenience of reference, all volumes of the new (imperial octavo) series which began in 1898 are numbered in continuation of the old demy octavo series, Vols. I-XXVII. Thus Vol. I of the imperial octavo series = Vol. XXVIII of the old series; and the present Vol. XLVIII corresponds to N.S. Vol. XXI.

The Index to the present volume includes an index to the Institute's monthly publication MAN for the year of issue 1918.

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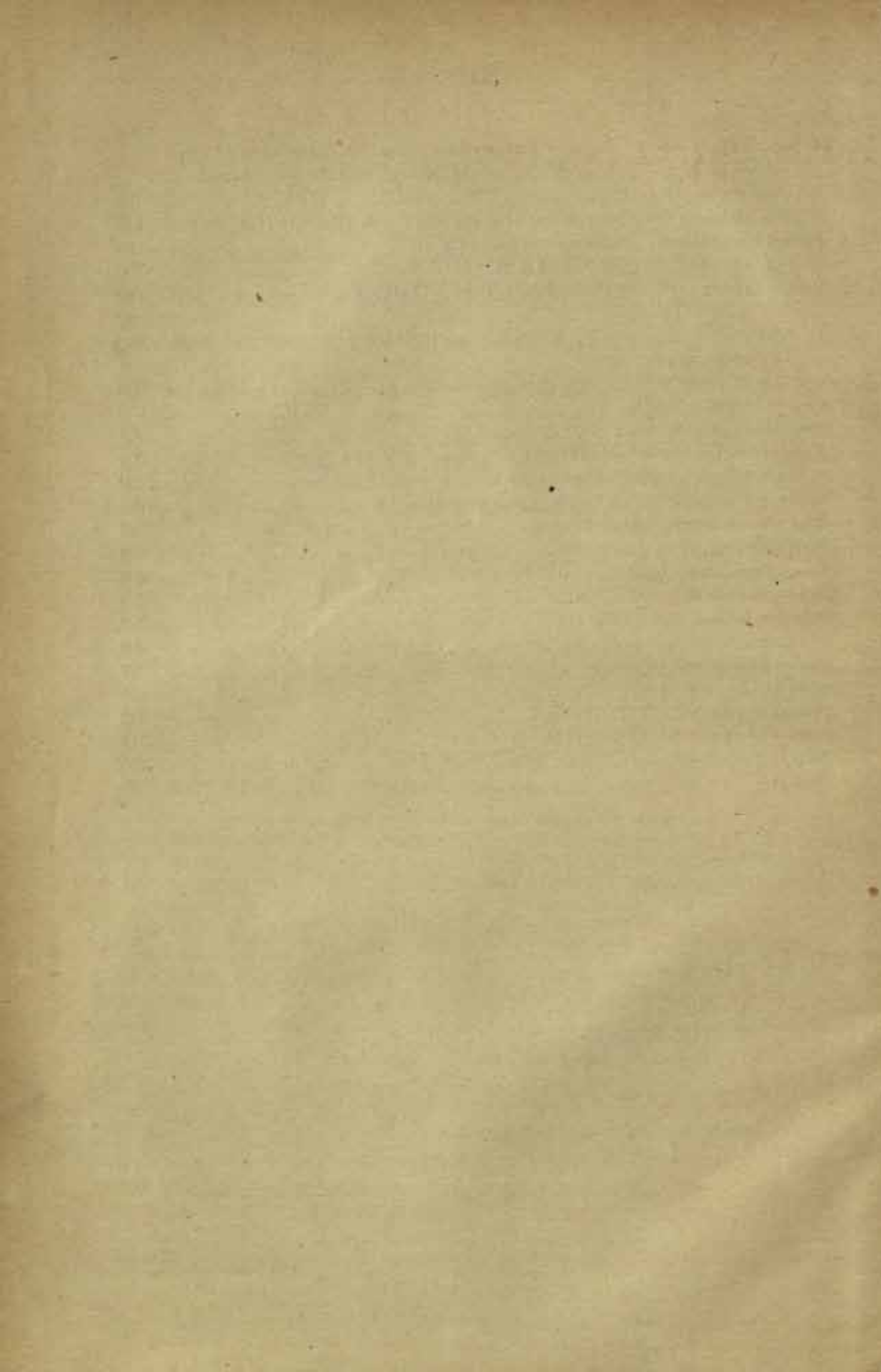
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JOURNAL
OF THE
ROYAL ANTHROPOLOGICAL INSTITUTE
OF GREAT BRITAIN AND IRELAND.

MINUTES OF THE ANNUAL GENERAL MEETING,

JANUARY 29TH, 1918, AT THE ROOMS OF THE INSTITUTE,
50, GREAT RUSSELL STREET.

Sir HERCULES READ, *President, in the Chair.*

The Minutes of the last Annual General Meeting were read and accepted.

The PRESIDENT appointed Mr. R. GRANT BROWN and Mr. G. R. CARLINE scrutineers, and declared the ballot open.

The HONORARY SECRETARY read the Annual Report of the Council for 1917 and on the motion of Professor KEITH, seconded by Mr. A. L. LEWIS, this was accepted.

The TREASURER read his financial report for 1917 and on the motion of Mr. A. L. LEWIS, seconded by Professor KEITH, this was accepted.

The PRESIDENT then delivered his Address on "Primitive Art and Modern Developments."

The SCRUTINEERS handed in their report on the ballot and the following were declared elected as Officers and Council for 1918-19.

President.—Sir C. Hercules Read, LL.D., F.S.A., F.B.A.

Vice-Presidents.

M. Longworth Dames.

W. H. R. Rivers, M.A., M.D., F.R.S.

C. G. Seligman, M.D.

Joint Hon. Secretaries.

H. S. Harrison, D.Sc.

T. A. Joyce, M.A.

Hon. Treasurer.—R. W. Williamson, M.Sc.

Council.

Capt. F. R. Barton, C.M.G.

C. O. Blagden, M.A.

L. C. G. Clarke.

O. M. Dalton, M.A., F.S.A.

W. L. H. Duckworth, M.A., M.D., Sc.D.

H. J. Fleure, D.Sc.

Sir J. G. Frazer, D.C.L., LL.D., Litt.D.

R. J. Gladstone, M.D.

E. S. Hartland, F.S.A.

W. L. Hildburgh, M.A., Ph.D., F.S.A.

A. L. Lewis, F.C.A.

Miss M. A. Murray.

H. J. E. Peake.

S. H. Ray, M.A.

Carveth Read, M.A.

F. C. Shruballs, M.A., M.D.

W. W. Skeat, M.A.

H. D. Skinner.

Sir Everard im Thurn, K.C.M.G., C.B.

S. Hazzledine Warren.

A vote of thanks to the PRESIDENT for his Address was proposed by Mr. A. L. LEWIS, who asked in the name of the Institute that the PRESIDENT would allow it to be published in the *Journal*.

This was seconded by Mr. SKINNER and carried by acclamation.

The Institute then adjourned.

REPORT OF THE COUNCIL FOR THE YEAR 1917.

During the year the Council has pursued its considered policy of keeping the activities of the Institute strictly within the limits of the economy and caution dictated by the continuance of the War.

All meetings have been held at the rooms of the Institute, since the Council has not thought it justifiable to incur expense in hiring outside accommodation. The Council is, however, convinced of the necessity for improvement of the conditions under which the Institute meets, and hopes that this may be effected when the War is over. The small number of ordinary meetings held during the year is

due, in the main, to the fact that many Fellows of the Institute are engaged in war work, and are not able to prepare and submit papers.

Although the *Journal* of the Institute has not suffered undue restriction, it has been necessary to refuse some papers which would have involved large expenditure in production. There has been no difficulty in securing matter for the *Journal*, and although the time which must sometimes elapse between the reception of a paper and its appearance is longer than is desirable, under present conditions improvement cannot be expected. It is satisfactory that there is now no long list of papers whose publication is overdue, as was the case in 1914 and 1915.

As will be seen from the following table, a net reduction has to be recorded of one Honorary Fellow, four compounding Fellows, ten subscribing Fellows, one affiliated Member and four Local Correspondents.

The reduction in the subscribing Fellows—ten—is the same as last year.

	Total Jan. 1st, 1917.	Loss by death or resignation.	Since elected.	Total Jan. 1st, 1918.
Honorary Fellows	43	2	1	42
Local Correspondents	35	4	—	31
Deduct also Ordinary Fellows	12			9
	— 23			— 22
Affiliated Societies	3	—	—	3
Affiliated Members	2	1	—	1
Ordinary Fellows:—				
Compounding	68	4	—	64
Subscribing	387	21	11	377
Total Membership	526			509

The losses which the Institute has suffered through death are the following:—Sir Edward Tylor (elected 1867, Obituary Notice appeared in *Man*, 1917, 16); Major-General W. D. Carey, R.A. (elected 1865); Sir M. A. Ruffer, C.M.G., M.D. (elected 1914), Lt.-Col. T. McCulloch, R.A.M.C. (elected 1904); Dr. G. A. Turner (elected 1911); Dr. H. Colley March (elected 1892); Dr. C. G. Renshaw (elected 1863); Mr. J. Cross (1907); Mr. Thurstan Peter (elected 1912); Mr. G. Worthington Smith (elected 1865, Obituary appeared in *Man*, 1917, 129).

MEETINGS.

The number of ordinary meetings held was six, as compared with four in 1916. Six papers were read, of which four were on ethnological and two on archæological subjects. In addition a joint meeting was held with the Prehistoric Society of East Anglia, at which three papers on archæological subjects were given by members of the Society, and two by Fellows of the Institute.

No Huxley Lecture was given, nor was the Huxley Memorial Medal awarded.

PUBLICATIONS.

During the year two half-yearly parts of the *Journal* have been issued, viz., Vol. XLVI, Part 2, and Vol. XLVII, Part 1. Of the former 100 copies and of the latter 79 copies have been sold. The corresponding figures for 1916 are 98 and 88, respectively, showing a net decrease for 1917 of 7 half-yearly parts. The usual twelve monthly parts of *Man* have been issued. The office sales have slightly increased, but there has been a rather larger decrease in the amount received from subscriptions.

LIBRARY.

The accessions to the Library number 191, of which 36 are bound volumes. The exchange list has been increased by two English and two foreign publications. The purchase of books is in abeyance, but the binding of periodicals and of books which require it has not been neglected. The great increase in the cost of binding renders it necessary to be even more than usually cautious in incurring expenditure under this head, but the Council considers that it would be false economy to allow this work to fall entirely in arrears.

INTERNAL.

On the invitation of Mr. W. Crewdson, who proposed to approach the Government with a view of obtaining free accommodation for certain learned societies, a statement of the strong claims of the Institute for consideration in any scheme of this kind was drawn up and forwarded to Mr. Crewdson for inclusion in his memorial. The Council has received no information as to the result, if any, of the proposed action.

EXTERNAL.

In November the Council reappointed Professor Keith and Professor Seligman as its representatives on the Board of Scientific Societies. It was also decided to make a contribution of £10 towards the expenses of the Board for the year 1917 and the same amount for the year 1918.

HONOURS CONFERRED ON FELLOWS OF THE INSTITUTE.

The Council desires to offer its congratulation to Sir A. Campbell Geddes, upon whom the honour of K.C.B. has been conferred; to its joint Honorary Secretary, Capt. T. A. Joyce, who has been made an Officer of the Order of the British Empire; and to Captain T. C. Hodson, who has been mentioned in dispatches.

TREASURER'S REPORT FOR THE YEAR 1917.

The Revenue for the year 1917 has exceeded its expenditure by £73 19s. 11d. From this has been deducted a sum of £10 0s. 5d. transferred to capital account, leaving a net surplus for the year of £63 19s. 6d.

The amount received from subscriptions was £4 11s. 9d. more than in 1916; but the amount of accumulated arrears, which at the end of 1916 stood at about £237, has increased during the year. I again appeal to Fellows to clear off these arrears. The reduction of my valuation of arrears, as compared with the estimate in the account for 1916, arises from the undesirability of putting any value on the older accumulations.

The figures for the *Journal* and *Man* for the years 1916-17 (omitting shillings and pence) are as follows:—

		1916.	1917.
		£	£
<i>Journal</i> Cost	274	279
<i>Journal</i> Proceeds	182	151
<i>Man</i> Cost	156	183
<i>Man</i> Proceeds	168	165

It will be seen that the net cost of the *Journal* was £92 in 1916 and £128 in 1917; and whilst *Man* produced a surplus of £12 in 1916, it has shown a loss of £18 in 1917. It must be borne in mind as regards both publications that the items of cost do not include the considerable expense of postage. These comparative figures are to be deplored; they are the result of the ever increasing cost of paper and printing, and, as regards the *Journal*, diminished sales. The former of these is due to the War and the latter presumably so.

My expectation of twelve months ago, that there would be a further depreciation in the value of our investments, has been realized. The further fall has been £19 4s. 5d.; but as the round sum of £100 transferred to capital account in 1916 was £9 4s. in excess of the depreciation which had then taken place, it has only been necessary to transfer £10 0s. 5d. to capital account in 1917. I fear we must look forward to possible further losses under this head.

ROYAL ANTHROPOLOGICAL INSTITUTE

ACCOUNTS FOR

REVENUE

PAYMENTS.

£ s. d. £ s. d.

RENT			175	0	0
"JOURNAL"			279	2	7
"MAN"			183	10	6
SALARIES			192	17	6
HOUSEKEEPING			26	9	10
ADVERTISING			11	18	0
STAMPS AND PARCELS			56	15	3
TELEPHONE AND TELEGRAMS			6	10	0
PRINTING AND STATIONERY			27	14	9
COAL, GAS, AND ELECTRIC LIGHT			12	9	1
INSURANCE—					
Fire	5	0	0		
Aircraft	12	10	2		
Employers' Liability	0	10	0		
					18 0 2
TRAVELLING			1	8	1
SUBSCRIPTIONS TO OTHER SOCIETIES, DIRECTORIES, ETC.			9	4	0
"HUXLEY LECTURE"			9	7	6
LEGAL EXPENSES			1	2	9
AUDITORS' FEE			3	3	0
DONATION TO BOARD OF SCIENTIFIC SOCIETIES			10	0	0
TYPEWRITER, ETC.			0	17	6
NEW BLINDS			3	3	3
ASSOCIATION FOR PROTECTION OF TRADE			1	4	0
SUBSCRIPTION TO BRITISH ASSOCIATION			1	0	0
POST OFFICE (telegraphic address)			1	1	0
BANK CHARGES			0	9	6
SUNDRIES			5	9	8
TRANSFER TO LIBRARY ACCOUNT			26	14	0
" " CAPITAL ACCOUNT			10	0	5
Balance in hand, 31st December, 1917			318	11	7½
			<u>£1,393</u>	<u>3</u>	<u>11½</u>

LIBRARY

£ s. d.

26 14 0

BOOKS AND BINDING

OF GREAT BRITAIN AND IRELAND.

THE YEAR 1917.

ACCOUNT.

	RECEIPTS.	£	s.	d.	£	s.	d.
BALANCE in hand, 1st January, 1917					254	12	1½
SUBSCRIPTIONS :—							
Current	691	13	6				
Arrears	52	15	9				
Advance	14	4	0				
					758	13	3
SALE OF "JOURNAL"					151	0	9
SALE OF "MAN"					165	11	4
SALE OF "HUXLEY LECTURE"					2	9	6
ADVERTISING					2	1	10
DIVIDENDS					56	6	6
SALE OF WASTE PAPER					2	8	0
SUNDRIES					0	0	9

£1,393 3 11½

ACCOUNT.

	£	s.	d.
TRANSFER FROM REVENUE ACCOUNT	26	14	0

CAPITAL ACCOUNT.

	£	s.	d.	£	s.	d.
DECREASE IN VALUE OF £886 BURMA RAILWAY STOCK:						
Valued 31st December, 1916, at 100.....	886	0	0			
Now valued at 98.....	868	5	7			
				17	14	5
DECREASE IN VALUE OF £300 METROPOLITAN CONSOLIDATED 3½ PER CENT. STOCK:						
Valued 31st December, 1916, at 82½.....	247	10	0			
Now valued at 82.....	246	0	0			
				1	10	0
DECREASE IN VALUE OF SUBSCRIPTIONS IN ARREAR						
Valued 31st December, 1916, at.....	56	14	0			
Now valued at.....	43	7	7			
				13	6	5
Balance 31st December, 1917.....	4,971	10	0			
				£5,004	0	10

BALANCE BROUGHT FORWARD 1ST JANUARY, 1917
TRANSFER FROM REVENUE ACCOUNT

£ s. d.
4,994 0 5
10 0 5

£5,004 0 10

BALANCE SHEET.

	£	s.	d.	£	s.	d.
Amount due for Anthropological Notes and Queries on 1st January, 1917	50	17	0			
Received during 1917	2	5	6			
				53	2	6
Total outside Liabilities	53	2	6			
				100	0	0
				47	10	0
				147	10	0

Books, Publications, and Stock

Furniture

Burma Railway £886 Stock at 98

Metropolitan £300 Consolidated 3½ per cent. Stock at 82

War Loan 5 per cent.

Cost of £100 Exchequer Bonds issued in 1916 at par and converted in 1917 into £105 5s. 3d. War Loan

Cost of £50 War Loan in 1917

Cost of £155 5s. 3d. War Loan

£ s. d.
3,493 8 0
200 0 0
868 5 7
246 0 0

Balances of previous Accounts:

Revenue Account	318 11 7½
Capital Account	4,971 10 0
	<hr/> 5,290 1 7½

£5,343 4 1½

Subscriptions in arrear, valued at
 Miscellaneous Publication Balances, stated at the
 amounts at which they stand in the accounts,
 but probably only of small value:
 Amount on 1st January, 1917

110 2 9
 3 3 1

106 19 8
 5 17 10½

Less received during the year

Owing by British Association

Cash:

In Bank

In hand (petty cash)

231 5 6
 0 11 11

231 17 5

£5,343 4 1½

ROBERT W. WILLIAMSON,
Hon. Treasurer.

We have examined the Accounts of the Royal Anthropological Institute and have obtained all the information and explanations we have required. In our opinion the Balance Sheet at 31st December, 1917, is properly drawn up so as to exhibit a true and correct view of the state of the Institute's affairs according to the best of our information and as shown by the books of the Institute.

58, Coleman Street, E.C.
 17th January, 1918.

JACKSON, PIXLEY, BROWNING, HUSEY & Co.,
 CHARTERED ACCOUNTANTS,
Auditors.

In my last report I referred to the view of the Council that a tentative increase in the expenditure on the *Journal* should be made, and it may be thought that the small increase of £5 hardly indicates an adoption of this policy. I must point out, however, that in 1916 the expenditure was defrayed to the extent of £50 by Sir Thomas Wrightson's generous donation, without which so much money would not have been spent that year; for comparative purposes the increased expenditure must be regarded as having been £55.

It must be borne in mind that, though an increase in the size of the *Journal* probably tends to produce a larger sale to the outside public, it increases the cost of production much more, as copies have to be printed for all the Fellows and for stock, and that the motives for enlargement are the benefit to Fellows of the Institute and the retention of the importance and prestige of the *Journal*. These are, however, cogent reasons; and the Council agrees with me that a further enlargement may be made, unless it is prevented by the necessities of national economy in paper or a continued increase in the cost of paper and printing. If only Fellows would pay their subscriptions, there could, subject to the national question, be a substantial enlargement of the *Journal* towards the dimensions reached immediately before the war.

ROBERT W. WILLIAMSON,
Hon. Treasurer.

PRESIDENTIAL ADDRESS.

PRIMITIVE ART AND ITS MODERN DEVELOPMENTS.

By SIR C. HERCULES READ, LL.D., V-P.S.A., F.B.A.

THE subject of primitive art has been treated by two recent writers, and it might seem that there is little more to be said. But, unfortunately, in neither of the volumes was the treatment of its many aspects founded on a sufficiency of knowledge, and the result left a good deal to desire. For my own part I make no pretensions to bring before you any startling novelties, but rather to invite you to look at old friends from a new and slightly different standpoint, and finally to endeavour to get at a real meaning of the term primitive; this I will deal with at once.

That the word has been loosely used is unquestionable, and a natural result is that it connotes a great many different meanings and suggests various stages of civilization. I would have said "culture," but of late that unhappy word has been, as Falstaff said, "so ill sorted" that one hesitates to use it. The English word, however, is nearly as remote in its true meaning from the German "Kultur" as is the English "fastidious" from its French analogue, and is thus easily pardonable.

A student of the painting of the Italian renaissance habitually uses the term "primitive" to mean the less advanced of the painters whose apogee is reached in Michelangelo and Raphael (roughly the fourteenth and early fifteenth centuries), and this use of the word is equally the fashion among our French friends. The latter is no small point, for it is generally admitted that in precision and neatness of diction their language is better than ours. What, of course, is implied in this connection is an early phase of any particular form of graphic presentment, with a prevalence of certain archaisms, and by no means is it to be inferred that the archaic style that characterizes the Italian—or other—primitives, indicates the earliest art, even of its own kind.

Here we find a current use of the word, unquestioned and practically universal in its acceptance. Another, equally common, is where the art of savages is styled primitive, and, as often as not, without reference to the precise cultural stage to which they have attained. While it may be relatively accurate to describe the art products of the Australian native or those of the Veddahs as primitive, it would be wrong to use the same word to describe the elaborate ornamental motives of the Maori or

the involved, and at times strictly artistic, sculptures of the African negro. So the argument runs, and it is clear that there is good sense behind it. Accuracy in terms is doubtless of great importance, and if any failure in that respect is likely to lead to false conclusions, such failure is to be deprecated in any branch of science, and particularly in anthropology, which is not only increasing its borders and its general usefulness daily, but is also new enough for guidance and monition to be of use and even yet in time. If we are to make a bid for strict accuracy, I take it that the art of no existing race of mankind can be called primitive any more than the word can be strictly applied to the race. If priority in time is to be the test, in the present state of our knowledge we get no further back than the Cave period. Before that we have no sign of what can be defined as graphic or plastic art. Thus for our generation we are safe in our terminology. But who will be bold enough to maintain that in fifty years there may not be found the precursor of the art of the Cave man, and that as a consequence the primitive art of to-day will be deposed from its pedestal? If one looks at such a possibility with a mind free from prejudice, it certainly would appear that this is no unlikely thing.

I will show you presently some of the best of the paintings and engravings of the Reindeer period, and will ask you to look at them and try and make up your own minds, as if you were looking at them for the first time, whether there is not a great probability that works of such observation, of so much refinement and such unrivalled executive ability, were the outcome of a previous stage of artistic infancy? On such a question it is unfortunate that the course of art history in historic times not only furnishes us with very poor data for comparison, but to be quite frank, in many regions the facts point in quite the opposite direction. The earlier dynasties of Egypt rejoiced in an art as refined as and far more vigorous than is to be found at a later date, just as the Minoan civilization of Crete stands apart in its virile distinction, to which nothing of the following centuries is quite comparable. If we turn to the Far East, a millenium or two later, the finest works of the sixth to the ninth centuries of our era, even if we leave unnoticed the productions of the Chow and Han dynasties, make the masterpieces of later times look puerile and colourless.

An attempt to discover a true solution among these contradictions is like groping in the dark. In the search we are prone to assume that races are like individuals, born weak and helpless, and that knowledge and culture come from experience and training, rather than that either of them sprang fully armed at all points straight from the head of Jove. And yet, as I have just said, a high standard in the arts would appear to be independent of inheritance, just as it can, and often did, flourish in an environment of war and turmoil that would seem frankly inimical to its very existence or growth.

In spite of these historical evidences, and in very defiance of our knowledge, I think we shall all of us be inclined to believe that before Cave man reached the

stage of artistic refinement when he bursts upon our view, earlier generations had laboured at draughtsmanship in a ruder style, and if this be so, there is good reason to believe that we shall in time discover the evidence.

In bringing before you to-day a small number of the pictures of Cave man, I wish to insist upon the amazing excellence of them, especially in regard to their fidelity to nature, and then to touch upon one other point where I shall be among the unorthodox: that is, how far, if at all, Cave man had gone in the domestication of animals.



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As to the artistic perfection of his drawings of the fauna of the time (and in my opinion perfection is a term that is but little in excess of the truth) I fear that words can be of but little avail. A long and sympathetic study has led me to believe that it is hard to use any but superlative terms in referring to them. But however sympathetic we moderns may be towards Cave art, the word is weak and inadequate when one tries to realize the relation of Cave man to his animal models. This relation was refined and intensified by a superhuman understanding of every attitude and every detail of the beast to be represented, and such was his competence

as an artist that he often performed marvels in the subtle indication of characteristic features. Our ignorance both of the animals and of the conditions under which they were drawn is so great that many points of this kind must inevitably be lost to us. But enough remain, and are recognizable, to prove the statement true, and I seriously question whether the most competent artist of our day, if provided with only the materials possessed by the Cave man, could surpass, even if he could equal in all ways, the drawings of that distant time.

Although the artistic qualities of early man are not matters of indifference to anthropology, it is still of greater importance to us to determine why the Cave artist was so busy a person, rather than to pass judgment on the quality of his work. A satisfactory answer to this question is found in the agreement in opinion of a group of authorities that totemism or magic is at the bottom of most Cave art, or, in the words of M. Déchelette, that the works of art of this period refer "to a cycle of primitive belief grouped in modern scientific language as totemism."

For the purposes of my argument I propose to assume that this was the case, though, as a matter of fact, it is by no means generally accepted. It has been well argued elsewhere,¹ and I only desire now to show that, if the assumption be an accurate one, it provides a ground for believing that Cave man may well have come near to the domestication of animals. It will have been observed that the evidence adduced in the contrary sense is almost entirely negative, *e.g.*, that in Cave remains (1) the thorax and vertebræ are rare; (2) that the remains of very old animals are common; (3) that the proportion of male and female skeletons is about equal, and so on. These arguments do not strike me as conclusive: they could be explained in other ways. M. Déchelette,² while he makes the definite statement that "*les tribus paléolithiques n'avaient point connu la domestication des animaux*," follows it with a caveat, "*on voit combien d'observations multiples et délicates exigent les recherches de cette nature*." M. Reinach is equally definite, but produces as a reason a fact contradictory to Déchelette, *viz.*, that animals of all ages are found in the caverns, "*alors que les peuples pasteurs et agriculteurs s'abstiennent, en général, de sacrifier les jeunes animaux*." If pastoral peoples did not kill young animals, then manifestly one would only find remains of the old in their rubbish heaps, and this is precisely what happens in the caverns, according to Déchelette. Take the point of the equality between the sexes: again, M. Reinach provides the answer. Pastoral tribes "*aiment tant leurs bestiaux qu'ils ne les tuent qu'à la dernière extrémité; ils se gardent surtout de les sacrifier tant qu'ils peuvent se reproduire, tant que les femelles peuvent fournir du lait*." Here again is an argument showing not only why both sexes should live to be old, but why the number of each to be killed for food should be approximately equal. If our

¹ S. Reinach, *Cultes, etc.*, p. 87.

² *Manuel d'Archéologie*, I, 337.

knowledge were only greater, one can hardly doubt that an equally good reason would be found to explain the absence of thorax and vertebræ.

But it is M. Reinach whose arguments provide us with good logical reasons for the earliest domestication of animals. Although he states unreservedly that it did not date before neolithic times, his explanation of the process suggests that it was contemporary with the totem and arose from it. Once it is admitted that totemism existed in quaternary times, there is, *prima facie*, no reason against the domestication of animals. M. Reinach argues thus. The hunting tribes are divided into clans under animal totems, with whom they are in alliance; each of these clans will neither hunt nor kill its own totem; but they go farther, the totem animals being the friends and guardians of the clan, and warning them of danger, it follows that there are always with the clan two or three of these animals. These, captured young, become accustomed to man and familiar with his ways; their young, born in the midst of the clan, become his friends, and thus domestication begins. And yet M. Reinach, relying on the evidence of archæology and palæontology, and disregarding his own logic, maintains that this far-reaching change in human life only took place in neolithic times. For myself, I am not by any means prepared at this stage to maintain the contrary, but if one takes the evidence and weighs it without prejudice, I am convinced that the matter is still something of an open question.

It was not, however, on grounds of this kind that I was first led to give thought to the subject. I approached it from the side of the drawings and sculptures themselves, and I came to the conclusion that no body of artists, however capable, could have produced the frescoes of Altamira and the engravings of the Dordogne without having enjoyed the study of animals at rest and in confinement. A large proportion of the fauna of the Caves, deer and the like, depend for safety on the acuteness of their senses and the swiftness of their flight, and man, even Cave man, would in his hunting have but a poor chance of coming to close quarters with his quarry until it was dead. And yet a remarkable feature of Cave art is that dead animals are very rare. They are grazing, or resting, or walking in groups or herds (see the figures, p. 13), while the artist has seized every point that emphasizes the vitality and live character of the beast. It was the observation of these significant facts that first led me to wonder by what means the artists had succeeded so well where the most capable men of our own time, with all the resources of zoological gardens and instantaneous photography, have hardly gone farther.

I must not omit to mention a series of articles in *The Field* of November 29th, 1913, by Mr. R. I. Pocock, F.R.S., dealing with this subject. He criticizes the drawings from the artistic side, as, for instance, that the legs of the Altamira boar are too thin; but this strikes me as a little captious. He might as well say the same of the legs of a Spanish bull in the bull-ring, if he was only familiar with the legs of an ordinary bull. The one statement that is of importance here is that

Mr. Pocock considers a cow from the cavern at Bruniquel, figured in *The Stone Age Guide* (reproduced in Fig. 1), to be polled, and notes that other persons have believed it to be standing to be milked. The drawing in question is, however, very sketchy, and I should be sorry to found very serious arguments upon so slight a base. But, in addition to those I have adduced already, his points are all on the same side, and deserve consideration.

I am aware that to convey to your minds, convincingly, the belief I have in my own, I should have elaborated both arguments and evidence to a greater extent than I have found possible, instead of bringing so meagre a sketch before you. But in these days, more than ever, one's time is not one's own, and the events of the last month, when the British Museum was threatened by invasion, have taken up every moment that I hoped to devote to the service of the Institute.

So much for the art of really primitive times; having glanced at its more salient features, it may be interesting to see what claim can be made for the particular development of modern art that demands recognition as the re-incarnation of the primitive.

There has been of late a strong protest from the musical profession against the popular belief that good music is nothing but a distraction and an amusement. The musicians claim that it is something of far greater value, that it is, in fact, food for the mind, and should be treated with the respect that such nourishment deserves. I am not inclined to question this claim. It is very likely to be well founded, and if that be so, surely a similar claim can be put forward on behalf of the graphic arts. Music and other sounds are essentially evanescent: after the vibrations have ceased, nothing but a memory remains. With the graphic arts it is different: the eye is continuously confronted with the production of the artist, and the permanency of the image cannot fail of an effect on the mind of the spectator. So far, therefore, as this form of art is of real use, its importance can scarcely be overrated, and it can be seen how greatly it may influence the mind and how necessary it is that this influence should be on the side of sanity and real progress.

The sequence of artistic movements during the nineteenth century is clear and well defined, and is the subject of a vast literature, most of it of no interest for our present quest. What would be of interest is the proper understanding of the psychology of the various phases, some indication of the ideals and motives that urged the artistic world along the paths upon which we now can look back. Doubtless the men who were the leaders of the successive movements would claim complete knowledge of their motives and ideals, and as a matter of fact they have in many cases explained the bases of their faith, and would be greatly affronted if they could hear our doubts as to the adequacy of the apologia. Nothing, however, is more difficult than to grasp the exact significance of the evolutionary phenomena of the moment. It would seem that perspective or distance is a necessity of proper

understanding, and that no man can either see the evolutionary process going on around him and in which he is an actor, any more than he can project his art or his ideas beyond certain limits, limits which characterize and belong to his time. This is at once demonstrated by the facility with which a fairly experienced person is able to divide up the products of any past age into chronological groups, each contemporary group possessing characters in common, no matter how great the efforts of the individual artists may have been to produce something original and in advance of the normal products of their time. If man is thus confined and hampered by the limitations of his environment, so also is he a poor exponent of the causes that guide himself and his compeers in their progress. He can do no more than grasp the details of his daily task, and would doubtless reject with contempt the suggestion that his individual (and as he would claim, entirely original) efforts were part of an evolutionary phase. One cannot do more than mention such points: the subject is capable of infinite elaboration, and would lead one into strange fields.

To leave the general for the particular, I would like to set down in a little detail two main causes that in my judgment have been responsible for the modern demand for a more primitive ideal in art.

I. The iron bonds of convention, which many centuries of social life have made stronger than any laws, hold all of us in complete subjection, and it is only in very rare instances that an individual has will power enough, or a sufficiently lively hatred of civilized conditions, to break through the restraint, and to live a life governed only by the real necessities of humanity. But it would seem that whatever the actions of the individual may be, whether he is governed by the desire to conform to the opinions of his neighbours or no, yet in almost every human being there still remains the germ of a desire to revert to the primitive life, outside the trammels of the proprieties dictated by society. That this is so, is, I think, strongly suggested, if not proved, by the tendency seen in every boy, as soon as he leaves his mother's apron strings, to "play Indians" or in some way to escape from the shackles fastened upon him by everybody with whom he comes into contact—irksome conditions repellent to youth, fettering his activities and interfering at every turn with his growing power of initiative. Such an ambition may be set down as the outcome of the study of romances, but in my opinion it is too deeply seated and also too universal to have relation to conditions that are limited in their influence. It is far more likely to be independent and innate, and to indicate a persistent survival of the original individuality of man. Nor is it by any means the case, as we all know, that such tendencies disappear with boyhood. Favourable conditions will soon rekindle the primitive tendency and turn the descendant of centuries of culture into a voluntary and contented savage. This was well seen, among many similar cases, in the action of the American colonists taken prisoners by Indians in the never-ending fights of the seventeenth and eighteenth centuries. Parkman

was much struck by this tendency,¹ and his testimony is very apt and to the point. He says: "Among the [English] captives brought in for delivery were some bound fast to prevent their escape; and many others who, amid the general tumult of joy and sorrow, sat sullen and scowling, angry that they were forced to abandon the wild license of the forest for the irksome restraints of society. Thus to look back with a fond longing to inhospitable deserts, where men, beasts, and Nature herself, seem arrayed in arms, and where ease, security, and all that civilization reckons among the goods of life, are alike cut off, may appear to argue some strange perversity or moral malformation. Yet such has been the experience of many a sound and healthful mind. To him who has once tasted the reckless independence, the haughty self-reliance, the sense of irresponsible freedom, which the forest life engenders, civilization thenceforth seems flat and stale. Its pleasures are insipid, its pursuits wearisome, its conventionalities, duties and mutual dependence, alike tedious and disgusting. The entrapped wanderer grows fierce and restless, and pants for breathing room. . . . The wilderness, rough, harsh and inexorable, has charms more potent in their seductive influence than all the lures of luxury and sloth, and often he on whom it has cast its magic finds no heart to dissolve the spell, and remains a wanderer and an Ishmaelite to the hour of his death."

On this he quotes also Cadwallader Colden to the same effect, and the latter also mentions cases in the other direction where "Indian children have been carefully educated among the English, clothed and taught; yet I think there is not one instance that any of these after they had liberty to go among their own people, and were come to age, would remain with the English, but returned to their own Nations, and became as fond of the Indian manner of life as those that knew nothing of a civilized manner of living."

Parkman, writing more than two generations ago, naturally attributes this "perversity" to moral or conventional laxity, a preference for the license of the Indian as compared with the restraints of civilization. The recorded instances on the one hand, and wide-spread inclination or tendency on the other would, however, seem to show that it is more likely to be an innate survival of primitive instinct.

If this be indeed the case, we may hope to find here a reasonable explanation of the curious forms assumed by art in our own time. It is commonly asserted that the favourite device of the English mind is compromise,² and is it not possible that the irreconcilable individual, living in the midst of an overheated civilization, but unwilling to sacrifice his whole being, finds a middle course in expressing himself

¹ *Conspiracy of Pontiac*, Boston, 1855, p. 508.

² It may be reasonably argued that much of Futurist and other modern artistic development is of continental Latin origin, and that among the Latin races compromise is hardly so popular. None the less, an Englishman caught in the toils of Futurism would be likely to adopt the national method of escape.

by artistic symbolism that to him represents these primitive instincts? It matters little or nothing to him that really primitive art is more nearly akin to the art of what is called the "finest period" than to any eccentricities of a decadent phase of human activity. The desire seems to be to produce something brutal, repellent, antipodal to the feeling and sentiment of the time—having all these qualities aggressively present both in form and colour. If conditions of this kind are fulfilled, then the twentieth-century progressive artist seems to consider that he has achieved a success. It will be obvious that this theory depends upon the assumption of honesty on the part of the artist. Many there doubtless are with whom the practice of this fantastic art is nothing but a pose, a means of making a living by prostituting their talents to a popular craze. But the genesis of the cult had no relation to such people: it was certainly as genuine a movement, arising from true conviction, as was that of the pre-Raphaelites; and I am convinced that it had its origin in some real human need inherent in the minds of its professors. This need I would describe as being one symptom of the innate and undying tendency in mankind, once restrictions are removed, to revert to savagery, just as Nature takes the untended garden and turns it into jungle.

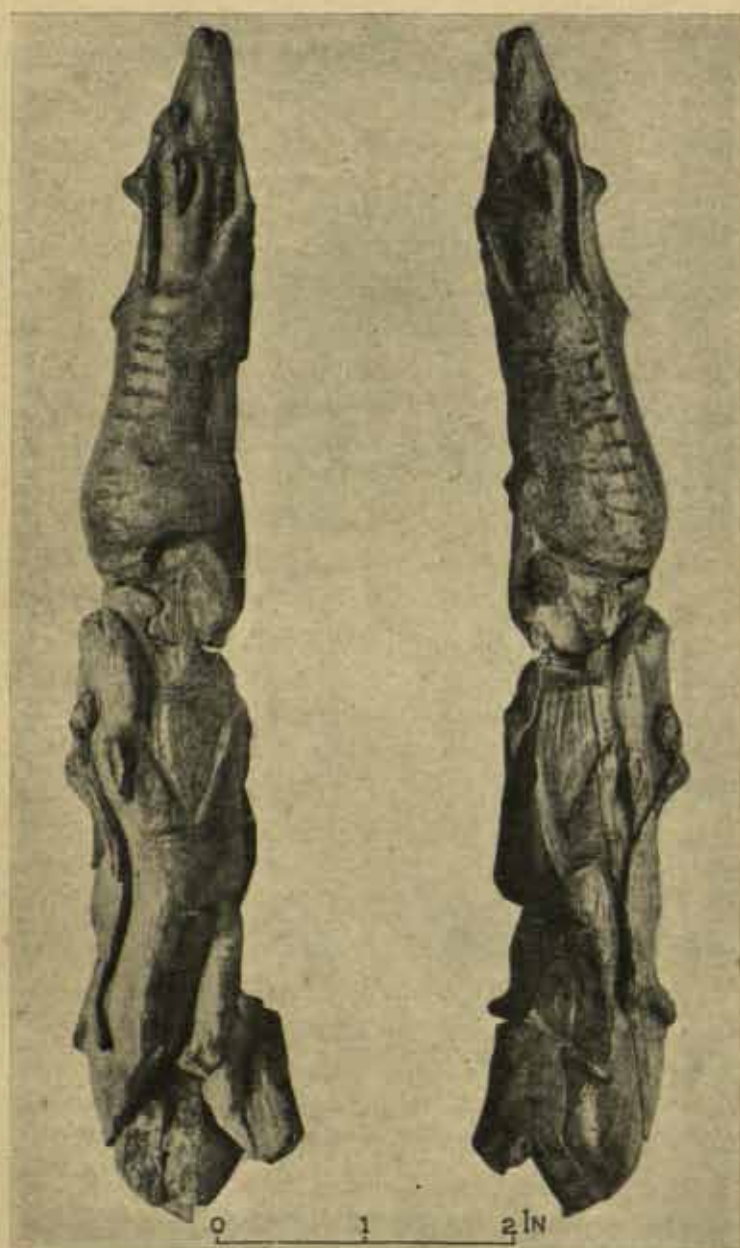
II.—The foregoing theory, all the same, does not cover the whole field. It deals with the productions of people who are, in their everyday relations with the world, apparently normal and commonplace even. They inhabit houses and pay their rent like others, and their clothes and general appearance do not greatly differ. A great deal of work of the pseudo-primitive kind is, however, produced by another group of men, to whom the above does not apply. One of the most accomplished draughtsmen that I ever knew was totally colour-blind, a defect that I believe was possessed also by Daniel Maclise. This failing is among those easily detected by anyone with normal colour vision. It is physical and its results are obvious. But if the disability should be mental and not physical the symptoms are by no means so easy to observe. Here we must appeal to the specialist in mental conditions, and in relation to this aspect of the subject, I am fortunate in having the considered judgment of the highest authority, Dr. Theo. D. Hyslop, whose article in the *Nineteenth Century* (February, 1911) on "Post Illusionism and Art in the Insane" deals with the artistic efforts of various types of abnormal mental condition.

Before approaching his main arguments, I must quote one sentence, for the reason that it connects and emphasizes my two theories in relation to modern "primitive" art. In noting that the unbalanced mind finds a difficulty in grasping complicated images and craves for a simpler diet, he says: "This craving for what is crude and elementary is nevertheless significant of a return to the primitive conditions of children and sometimes betrays an atavistic trend towards barbarism." So that here we find again, and for another reason, the same desire to escape from the shackles of civilized complexity and revert to simpler conditions. To Dr. Hyslop, the artistic

manifestations of his patients are, naturally, only considered as one of many symptoms indicative of their mental states, and these divide themselves into kinds and degrees. For instance, "Most paranoiacs (deluded persons), who, as a rule, do not suffer from disorders of their physical or co-ordinative mechanism, present in their artistic works manifestations of genuine and fertile talent. In spite of the evident craziness of their ideas, their technique is usually too skilful to appeal to gaping simpletons as mysteries and revelations of genius." On the other hand, he says, "In artists suffering from general paralysis there is a retrogression, both sensory and motor, of the artistic faculty. Sensation and perception of colour, form and perspective become impaired. There is also loss of the tactile and of the so-called muscular senses so essential to the proper co-ordination of movement. Not only do they suffer from tremors, but also from failure to co-ordinate the various groups of muscular activities. Hence the executive mechanism becomes defective, faulty and impotent. This gradual retrogression of the mental and physical functions results ultimately in a pathological return to the crude and rudimentary conditions of barbarism." Thus we find, in insanity, two remotely different conditions: in one the hand remains completely capable of executing the commands of the brain, and does so with all its accustomed skill, and the dementia is only evidenced by the quality of the design; in the other the connection between hand and brain seems to be severed, and "as cerebral degeneration progresses, the artistic representations become so negative in quality that for any person other than the artist himself they have no meaning and arouse no feelings other than those of pity." It is not without interest to note, in passing, that the latter type of quasi-artistic production is precisely that which is seen in the most violent and aggressive of the new school.

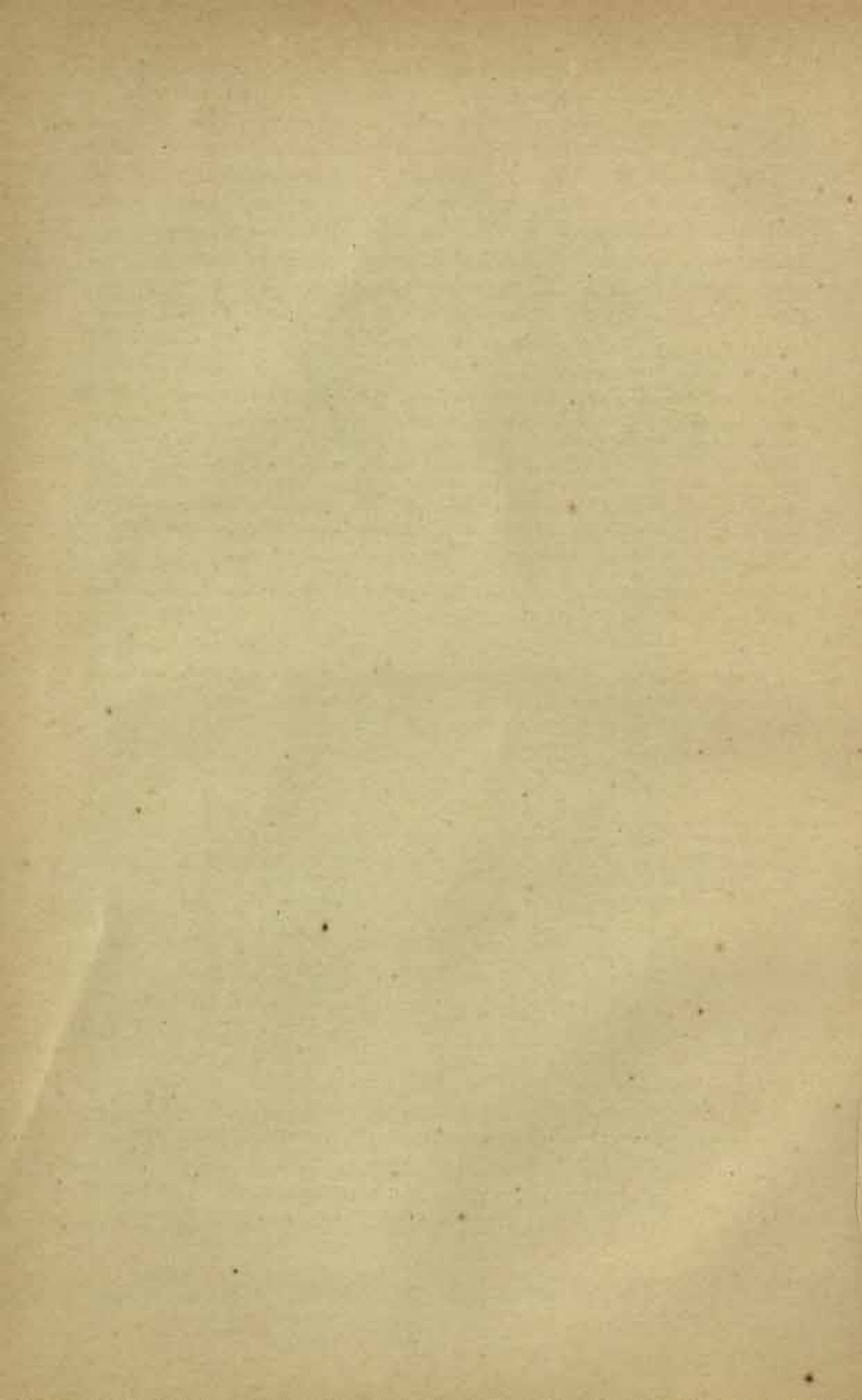
There are two qualities belonging to the artists in Bedlam which set them apart from their compeers outside of such institutions. One is, that apparently there cannot exist among them anything of the nature of a mutual admiration society, "for the simple reason that they are concerned only with their own individual states and experiences" and are indifferent and unappreciative of the efforts of their fellow artists. The second quality lies in the certainty of their honesty. "Their efforts are not only genuine, but there is also no wilful suppression of skill in technique. . . . As a matter of interest, the writer may state that he has never seen such an instance of wilful imposture by an insane artist." Without doubt many of the persons professing this "primitive" art, and still outside the walls of Bedlam, may also possess these two qualities, but once they reach the Bedlam stage, it would seem to be impossible that they should.

I have probably said enough to make my line of thought clear, and I hope in my quotations that I have done justice to the able and fascinating article of Dr. Hyslop. What, at any rate, is indisputable is that the experience of the professional pathologist in charge of the insane confirms in every point the view held



POINT OF MAMMOTH-TUSK CARVED WITH REINDEER, MONTASTRUC, BRUNIQUEL,
FRANCE ($\frac{3}{4}$ LINEAR)

PRIMITIVE ART AND ITS MODERN DEVELOPMENTS.



by an anthropologist with artistic tendencies like myself, and such agreement would seem to prove that there is a solid foundation beneath it.

If I am right in this, then my contention is right that one cause of the rise and persistence of this so-called primitive art in our days is mental obliquity in the professors of it; I think also that I have produced some evidence of a second cause, in an innate tendency in mankind to revert to primitive conditions when circumstances are favourable, and finally, although the exponents of the first cause are insane and those of the second may be, and probably are, in a normal mental condition, yet the two causes may be inter-related.

NOTE.—Economy of paper has led to the several figures of Cave drawings being placed on the same page. Figs. 3 and 4 illustrate two points: first the artistic qualities of Cave man, and second the great probability that these animals were seen by him in more or less a state of repose, such as would result from their domestication. It seems to me unlikely that the pose of these heads is that of wild animals, seen only in rapid flight by the artist. The pose of the animal in Fig. 2 provides even a stronger argument. It is hard to believe that the artist who drew it had only seen the animal either dead or in rapid movement. Fig. 1 is dealt with in the text, but the same argument applies as in the case of Fig. 2.

The curving of the two reindeer shown in the Plate¹ suggests a line of the animals walking calmly in a string, and it seems unlikely that such life-like representations could have been made from dead creatures.

¹ The block for this plate, and those for the figures in the text, were kindly lent by the Trustees of the British Museum.

TATTOOING IN SOUTH EASTERN NEW GUINEA.

By CAPT. F. R. BARTON.

[WITH PLATES II-XV.]

INTRODUCTION.

TOWARDS the close of Dr. Haddon's monograph "The Decorative Art of New Guinea," there occurs the following sentence:—"It is quite possible that many of the geometric and more or less formal designs in use in British New Guinea have an origin which is by no means obvious at first sight. With regard to these, nothing of any value can be done at home. If these designs are ever to be elucidated, it can be accomplished only by those living on the spot. Information must be carefully collected, critically examined, and carefully compared and checked. In no case should the collector theorize: it is the native's explanation which is required. When it is discovered what a design represents, then the reason for its employment should be discovered, and whether it has or has had any religious significance."

I had collected the names of a number of Western Papuo-Melanesian tattooing patterns and taken photographs and sketches of them before I came across the advice contained in the above-quoted passage—advice which I thereupon determined to follow as far as possible. The result was that I amassed a considerable quantity of material, and should have collected a good deal more had not circumstances necessitated my leaving New Guinea earlier than I had anticipated. Gaps will be found here and there which not only render this paper incomplete but which had they been filled might have helped to corroborate or modify some of the conclusions I have tentatively arrived at.

For anybody who has acquired a fair knowledge of the Motu dialect and the confidence of the natives, it is easy enough in New Guinea to learn from native women the names of the different tattoo patterns¹ worn by this or that tribe, and if the enquirer has an observant faculty, he will soon find that some patterns are called by the same words as the names of certain birds, fish, etc., and that others have names which carry no alternative meaning. But when it comes to a question of ascertaining the reason for the employment of a certain design, or as to what association exists between designs which are named after natural objects and the objects themselves, it is found that great difficulties present themselves—difficulties which are largely augmented by the fact that some names are evidently not original names, but have been given later owing to an imaginary likeness between the pattern and some commonplace object.

¹ The men's knowledge of the specific names of patterns is very imperfect.

Furthermore, my experience has been that natives seldom, if ever, associate mentally the name of a conventionalized design with its corresponding natural object. There is, for instance, a Waima tattoo pattern called *areau*, which means frigate-bird, but if Waima natives are asked to explain what is the connection between the pattern and the bird, they show bewilderment and confess that it had never struck them before that the name of the pattern is the same word as their word for frigate-bird. In fact the natives' explanation of tattoo patterns is not obtainable, and if, under pressure, an explanation were offered, it would probably be quite unreliable.

So far, then, as Dr. Haddon's advice in the above-quoted paragraph is concerned, it may be considered doubtful whether in a subject so archaic as tattooing the origin of any designs can be elucidated any better on the spot than elsewhere.

This means of approach to the question having, for the above-stated reasons, proved unfruitful, I decided to venture upon an attempt to examine the etymology of those New Guinea pattern-names which carry no alternative meaning, and to compare them with words in allied languages and dialects, hoping that thereby some light might be thrown upon the subject. The danger attending an experiment of this kind when made by an amateur will be patent to any trained philologist, and the difficulties of the quest will easily be appraised by anybody who has had the hardihood to set forth upon a similar venture. An argument which rests upon verbal equivalents and affinities requires that it shall be fortified by a considerable number of words in allied dialects. These, however, have not been forthcoming in sufficient quantity in any one case to carry conviction, and though interesting indications have come to light here and there, the results generally must be regarded as disappointing.

In these circumstances it is with great diffidence that I publish the suggestions contained in this paper: my excuse for doing so is that they may excite criticism, for I feel sure that if the ultimate derivation of Oceanic tattooing patterns is ever discovered it will more probably be through a philological approach than any other avenue.

I.

Though the custom of tattooing in South-eastern New Guinea is wide-spread, it is not consistently practised except by the following tribes: Waima, Roro, Mekeo and Pokao to the West of Port Moresby; the Motu group,¹ inhabiting the coast from Redscar Head to Hood's lagoon; the Keakaro tribe; the Mailu tribe; one branch of the Southern Massim; and, lastly, a small group of tribes in the Collingwood Bay District on the North-east coast.

¹ The "Motu group" is an arbitrary classification which I have adopted for the sake of simplicity. In this paper the term includes the Motu tribe proper, the Sinaugolo and the Hula tribes.

The non-Melanesian tribes who inhabit the coast line of the Papuan Gulf from Cape Possession to the most easterly outlet of the Purari delta—a district called Elema by the Motuans—confine such rude tattooing as is practised by them to the faces of the men. The Purari delta tribes and those living to the westward of that river—a district the Motuans call Namau—do not, as far as I am aware, tattoo at all. Scarification is not practised either in the Elema or the Namau district. I have no drawings or photographs of tattoo marks worn by Elema individuals, but my recollection is that the rude patterns executed by them bear no resemblance to the Western Papuo-Melanesian designs, being for the most part single or concentric circles with or without rays.

The men and women of the dark-skinned non-Melanesian tribes, known collectively as Binandele, who inhabit the coast and river banks from Cape Nelson northwards to the Mambare River, do not tattoo, but many of them decorate their skins by scarring.

Occasional facial tattoo marks, rudely executed, are to be seen on men of the bush tribes from the southern slopes of the Owen Stanley range. There is said, however, to be a bush tribe living in the Hydrographers' Range on the north-east coast who tattoo themselves elaborately.

In South-eastern New Guinea tattooing operations are invariably performed by women. The men are unacquainted with the technique of the art, and though the names of patterns may vaguely be known to them, they are, for the most part, unable to give with certainty the correct name to any particular pattern. In districts where until recent years tattooing was consistently practised, women were tattooed without exception. In the case of men, tattooing appears to have been optional, except, perhaps, when individuals were tattooed with the distinctive marks for having taken human life.

I failed to find that any particular pattern "ran" in a family. An old woman of Gaile village (Motu district)—an expert tattooing operator—told me that she could give no reason for one girl being tattooed with one pattern and another girl with another pattern. She said that the pattern is traced in pigment first, and if it is then seen to be an unsuitable pattern on account of the colour of the skin, or other cause, another pattern is substituted, and so on until one is found to be suitable, and this is then pricked in. I cannot explain what was meant by suitability of pattern in relation to the colour of the skin.

The practice of tattooing is not confined to those tribes whose skins are fair, for there are tribes, such as the non-tattooing portion of the Southern Massims, whose skins do not differ in shade from those of the tattooing section of the same group, who yet make no attempt to practise it. On the other hand, there is no doubt that the accuracy and symmetry of the patterns are better preserved by the people of those tribes whose skins incline to fairness.

II.

The first stages of the tattooing of girls of the Waima tribe, the tribes of the Motu group, and the Aroma and Mailu tribes, are put in hand at an early age. The Mekeo tribe and the Southern Massim begin operations at a later age.

The order of tattooing the several parts of the body by the Motu group tribes is as follows :—

Girls from 5 to 8 years of age.

- (1) Face (*vaira*).
- (2) Arms (*ima*).
- (3) Chin (*ade*).
- (4) "Base of " vulva (*kiobadi*)¹.
- (5) "Top of " vulva (*kiodori*)¹.
- (6) Armpits and shoulder blades (*kadidiha mai murimuri ida*) = armpit, and, back of, with.

The foregoing parts of the body are all tattooed twice over (with intervals between the operations) before the second series of tattooing operations is begun. The second series begins when puberty is approaching, namely :—

- (7) Upper throat marking (*gado roho*)².
- (8) Inside of knees and thighs (*kio gunina*) = vulva, inland, the.
- (9) Lower leg and feet (*ae mai ae palapala*) = leg, and, leg, foot.³
- (10) Buttocks (*kunu*).
- (11) Chest and nape of neck (*gado, gado natuna, gado gado*).³
- (12) Sides and back (*ohe mai dori*) = side, and, back.
- (13) Region between navel and chest (*kopa*).

The place order followed by the Waima tribe, and, I believe, by the Aroma and Mailu tribes also, is much the same as the foregoing, with the exception of the face. This these tribes leave to the last : it is not in fact put in hand until the girl has reached a marriageable age.

¹ *Kio* = vulva ; *Kiobadi* and *Kiodori* denote respectively (a) the upper part of the thighs and region immediately below the vulva, (b) the region between vulva and navel. The sense of *badi* appears to be "base," and of *dori*, "top."

² The question of the meaning of *gado*, *roho*, and the *gado* patterns generally, is discussed in another part of this paper (see p. 50).

³ Female children of men who have been in command of *lakatoi* (trading canoes),—(*badi tauna* and *dori tauna* = base-man and top-man, or primary-man and secondary-man),—on trading voyages to the Namau district are tattooed on the lower legs and feet with distinctive patterns when they are about 8 years of age. This tattooing is called *lakatoi dagina* = lakatoi mark.

The implements, and the names of them, used by the tattooing operators of the Motu tribe are as follows :—

- (1) A small shallow earthenware basin (*ituru*).
- (2) A potsherd (*ataga*).
- (3) A small piece of wood, or portion of a palm leaf rib, for marking the pattern in pigment on the skin (*puriki*).
- (4) A thorn (*gini*) attached to a twig.
- (5) A wooden striker (*iboki*).
- (6) Tattooing pigment, made by mixing water with lampblack, the latter obtained by burning tree gum and collecting the soot on a potsherd (*lamanu*).¹

A Motu girl who is to be tattooed lies on the open platform of her father's house (Plate XI, Fig. 1). The operator (who is not necessarily a relative) paints the pattern on the skin free-hand with the *puriki*, which is held between thumb and first and second fingers, the hand being steadied by resting the tips of the third and fourth fingers on the skin of the subject—the *puriki* being dipped occasionally in the *lamanu* pigment in the same manner as a painter fills his brush. The pattern is then driven into the skin by a quick tapping movement of the mallet or striker (*iboki*) on the thorned twig (*gini*) over the drawn pattern. An adult female relative of the girl is usually present during the operation. Her duty is to keep the girl in the required position, who would, however, consider herself disgraced if she cried, or resisted, under the operation. Both she and those present remain strictly silent while the operation is in progress. The Motuans have a tattooing legend² which tells that originally tattooing gave no pain, but that this exemption came to an end one day long ago when a girl who was being tattooed irreverently laughed. The people of Aroma (Keakaro) have the same legend.

As far as I know no chants are sung during tattooing operations in New Guinea. Feasts, however, of an unimportant character are given by the relatives of girls at Waima when the last stages of tattooing have been completed, and the fully tattooed girls at this time do no work, but wear a profusion of ornaments borrowed from the members of their clan, and they display themselves in their finery for several days in the village.³

In Hood Bay it was the custom, which was abolished some fifteen years ago, to display nubile girls whose tattooing had reached one of the last stages before completion, upon a *dubu* (ceremonial platform), when certain rites were performed. A description of this ceremony will be found under pattern No. 18⁴ (see p. 40).

¹ Cf. the *lama* nut from the tree *Aleurites moluccana* by burning which the Samoans obtain the colouring pigment for tattooing by a like process, collecting the soot in an inverted coconut shell cup. *Tatowirung in Samoa*, Marquardt, p. 9.

² See p. 75.

³ *The Melanesians of British New Guinea*, p. 265, Seligman.

⁴ Since this paper was written I have seen Dr. Malinowski's treatise on the *Natives of Malu*. In the short account he therein gives of their tattooing, he says: "The ornamenting of the face"

III.

Waima.

The earliest record we have of tattooing patterns worn by the people who speak the Roro dialect—the dialect spoken by the Waima tribe—is that given by d'Albertis, who spent some time in this district in the early '70's of the last century. He states: "I can scarcely call the men tattooed, for although they frequently have marks on the chest or shoulders, they occur very rarely on the face," and in another place he states "the women have nearly their whole body covered with marks."

Finsch records having seen, in 1882, tattoo marks on the men of Waima. Judging by his description of them it is evident that some at least were homicide marks, such as the chest patterns and the zigzags. Homicide marks belong to the past: for my part I do not recollect having seen any tattoo marks worn by the men of this tribe.

Waima females are tattooed from head to foot, and there seemed to me to be no distinctive difference between the pattern schemes on one woman or another. I have no record of the patterns worn on the backs or beneath the petticoats of these women.

1. *Areau*.—This word means frigate-bird, and the tattoo patterns so called are especially interesting owing to the many variations which appear to have been evolved from the original type. It is probable that the original *areau* convention took the form of a flying bird, i.e., a four-lined obtuse-angled zigzag, for this simple convention, which is common in the Bismarck Archipelago and in the Solomon Islands, is by no means rare among the Waima *areau* patterns.

The *areau* subject in its various forms is tattooed repeatedly on Waima women in the region of the breasts and on the backs of the hands, and it is invariably placed on the upper part of the chest inside the *mairi-mairi* angle. (Plate II.)

The word *areau* is interesting for the reason that it appears to bear little or no relation to other words meaning frigate-bird in the Melanesian dialects of South-Eastern New Guinea.

2. *Ra'a ra'a*.—This word in the Roro dialect means centipede (*Scolopendra*). It may be that the terminal to the tattoo pattern consisting of a broad straight line with a short interruption in the centre represents the head, and the opposite angular terminals the tail, of the creature. This is so far true to nature in that the antennæ of *Scolopendra* are remarkably straight, and branch at right angles to the median line of the body, and that the hindermost pair of limbs, which are much longer than, and differently shaped from the other limbs—having more the appearance

[the body, with the exception of the shoulders, having been previously tattooed] "is connected with a small feast, in which women only participate. Taro is brought into the house and the girl sleeps on it. The next day the girl's face is tattooed, and in the afternoon the food is eaten."

of antennæ than legs—curve first outwards and then inwards. The upper part of the bellies of Waima women is covered by three repetitions of these centipede conventions, and a further series of three, in the same lines of axis, appear to extend over that part of the belly which is covered by clothing. The heads of the two central figures are usually depicted as meeting at the navel. The tail end of each figure is surmounted by an *areau* (frigate-bird) convention, and the breasts are covered with the same conventions. (Plate III, Fig. 2.)

A combination of centipede and bird patterns is very common in the tattooing on both sexes of the Samoans, who call the centipede *atua loa*, which means "long god." The bird which is figured with *atua loa* is *gogo*, a kind of sea-gull¹ [cf. *Kobobe* (Aroma and Hula) = frigate-bird].

There appears also to be a combination of bird and centipede conceptions in one of the Motu *lakatoi* (trading canoe) pennants. The name by which the pennant is known is *raga raga*,² which may be the same word as *ra'a ra'a*. It consists of a length of ornamented rope to which are attached two pieces of wood carved in crescentic shape with an interval between. Tied to the horns of the crescents are tassels of leaf-fibre. These crescents are probably flying-bird conventions. (See remarks under pattern No. 28.)

Centipedes were formerly regarded with great repugnance throughout Polynesia. The common word for centipede in Polynesia is *veri*, and the same word is used in most of the Polynesian islands to signify loathing, dread, or fear. Turner states that Samoans believed that the movements of a centipede in certain circumstances betokened whether a sick person would die or recover.³ In the Caroline Islands the original name for centipede has been tabooed: by day it is called *man-en-ran* (creature of the day), and by night *man-en-pong* (creature of the night).⁴ The Javanese eschew naming the centipede at evening or night. It is then referred to as the red ant.⁵

¹ *Die Tätowirung beider Geschlechter in Samoa* (Marquardt). When tattooed on males the bird conventions are sometimes called *fa'aila* (*ila* = birthmark).

² *Raga raga* has two other meanings in Motu: (a) the region immediately below the armpits, (b) a kind of marine shell. The latter are broken into pieces, and those fragments which are red-coloured are selected, and ground smooth. These having been threaded on to the string of a *doa* (boar's tusk) pendant, the whole ornament is called *alaha*. *Ra'a ra'a* may possibly be a duplicated form of *raa*, this being a common Melanesian word meaning "great." [Cf. *dirava* (Motu) = a species of mythical being, a word which the members of the London Missionary Society have adopted for "God." The Roro equivalent to *dirava* is probably *tsirava* = spirits of the dead. Cf. *helaga* (Motu) = sacred, and *raa* (Tahiti) = holy.] Cf. also the Samoan word *la'ala'a*, the latter being the name of several Samoan deities among which there was a god supposed to be imbued with prophetic powers in cases of war and sickness. (See *The Maori Comparative Dictionary* (Tregear), under *rakahua*.)

³ *Samoa* (1884), p. 69.

⁴ *Caroline Islands* (Christian), p. 361.

⁵ *Golden Bough* (Frazer), iii, p. 411.

In New Guinea centipedes are regarded with disgust, but I have never heard that they are accredited by the natives with any magical power.

3. *Mairi-mairi*.—In several Western Papuo-Melanesian dialects *mairi* denotes mother-of-pearl shell (*Melagrina margaritifera*) as well as the crescentic ornaments made therefrom which are worn as pectorals. The *mairi-mairi* tattoo pattern is the V-shaped marking on the chest, and its smaller repetition on the nape of the neck. Similar chest patterns are worn by the women of all the Western Papuo-Melanesian tribes with the exception of the Aroma and Mailu tribes. This mark is invariably recognised as a sign that the female on whom it is tattooed is betrothed or married. Further remarks on this pattern will be found under *gado* (No. 28).

4. *Koio-Koio*.—In the Roro dialect *koio* is the well-known fretted turtle-shell ornament of circular shape. The art of making these ornaments is—in South-Eastern New Guinea—peculiar to Waima.¹ The tattoo pattern takes the form of a rectangular spiral: it is tattooed on the front of the legs above the knees, and on the calves. (Plate II, Fig. *b*.)

5. *Boaboa*.—Lines tattooed on the faces of women are all called *boaboa*, and the same word is used at Waima to denote tattooing in a general sense. (Plate II, Figs. *a* and *b*.) One informant told me that face-markings are also sometimes called *baa*, and gave as a translation of this word the Motu word *pepe*, but this information remains unconfirmed. The meaning of *pepe* is somewhat wide. Lawes translates it to mean “banner,” but it also denotes a clan-badge flown from the sail-limb of a *lakatoi* (Motu trading canoe), and also streamers made of pandanus leaf which are worn by men suspended from the armlets as a form of decoration at feasts and dances. The underlying sense of the word is probably “fluttering,” and it may possibly be related to *pepe*, which is the common word for “butterfly” throughout Melanesia and Polynesia. (See remarks on p. 68.)

I am unable to state whether the face lines tattooed on Waima women differ in pattern one from the other: they are not tattooed until just before or just after marriage.

6. *Bihii*.—All tattooed dot marks are thus named. *Bihii* may be the same word as *vihii* (Roro) = star.

There is at least one Waima tattoo pattern the name of which is missing in my notes. This is the marking shown on the front of the legs below the knees in Plate II, Fig. *b*. It appears to be the same pattern as the Mekeo *mangeau* design.

¹ In the Mekeo district these ornaments are called *gefe* [cf. *gere* (Hula) = feather, and *gave* (Espiritu Santo) = wing], or *kina maanga* = face of the sun. Dr. Seligman spells the word *koiyu*. Perhaps the original meaning of *gefe* (Mekeo) and *gere* (Hula) was “brilliance.” [Cf. *kepe* (Barriai, N. Britain) = pearl-shell.] A parallel instance is afforded by the Polynesian word *kura* or *ura*, which may mean red, fiery, red feathers, or brilliance. *Ura* (Motu) = crayfish, and is possibly the same word as the Polynesian word *kura* or *ura*, the connecting idea being the bright red colour of these crustaceans when boiled.

Mekeo.

I do not recollect having seen any tattoo marks on a male of this tribe. Women are tattooed on the trunk of the body, but not on the face nor on those parts of the legs which are uncovered. My notes do not show whether their arms are tattooed, nor do I know what patterns may be tattooed on those parts of the belly and buttocks which are concealed by clothing.

7. *Aieme*.—This is a V-shaped betrothal pattern, here tattooed in the form of a single stripe with a break at the apex of the angle and two projections on the inner sides of the lines. *Aieme* is, perhaps, a compound word. [cf. *aio* (Mekeo)=neck; *geme* (Motu)=chest; *eme* (Pokao)=lime-spatula. The reciprocal chewing of betel-nut with lime by a youth and a damsel is by the Western Papuo-Melanesian tribes regarded as a pledge of marriage].

8. *Aemakiunga*.—Inside the *aieme* angle—in the same position as the Waima tribe wear an *areau* design—a figure is often tattooed which has the form of a series of flying-bird conventions, and is called *aemakiunga*.¹ Père Vitale (a missionary who has been long resident in Mekeo) informed me that this word literally means “soaring-plunging.” At my request he questioned the natives with a view to ascertaining whether the word had any other signification besides the tattoo pattern, and he was told that *aema* or *aemakiunga* is the name of a large bird which flies high aloft and never alights on the ground. This may have been their way of describing a spirit-bird, but the description suggests a frigate-bird.

There is reason for thinking that tribes who at some bygone period have been sea-faring people and who have subsequently settled inland, occasionally substitute for sea-birds which formerly they held in special regard, other birds bearing some sort of likeness to them. A case in point came under my notice in Mekeo. I happened to be at the large village of Aipiana in the upper Mekeo district when the *upu* of one of the clans was decorated for a festival. Suspended from the projecting ridge-pole of the building was a black effigy of a bird with outspread wings and a *forked tail*. I enquired what this bird might be and was informed that it was the bird called *auopa*. Further enquiry elicited the fact that *auopa*, in the dialect of the place, means shag (*Phalacrocorax*), of which kind of bird there are large numbers in the neighbouring fresh-water swamps and lagoons. Now shags are so far like frigate-birds in that both have glossy green-black plumage, both have webbed feet, both have the habit of flying in single file, and both are given to soaring with rigid wings. But whereas shags have not got forked tails those of

¹ *Kiu* is perhaps the Mekeo equivalent of the Waima *tiu* and Motu *diho* (Melanesian *sico*), meaning to dive or descend, and *ae* is probably the same word as the Motu *dae* (Melanesian *sake*) = up. Frigate-birds have the habit of swooping down from a height upon other marine birds, thus compelling them to disgorge, and catching the disgorged fish or morsel in mid-air. The Maoris have a word *tiu*, meaning (1) to go swiftly, (2) to swoop as a bird in flight, (3) to fall to the ground as a kite when flying (Tregear's Dictionary).


frigate-birds are so deeply forked as to be clearly visible even though the bird may be thousands of feet above one.

It may be that the original tutelary bird of this Mekeo *upu* was a frigate-bird, and that the tribe, having lost touch with the sea, have substituted the shag for the frigate-bird on account of a superficial similarity of habits and appearance, and have given to it a forked tail.¹

9. *Pi'iu*, meaning "star," is the name of the concentric lozenge-shaped figure between the navel and the breasts. (Plate IV, Fig. 1.) The same design is often carved throughout this district on coconut-shell sago spoons and is also painted on perineal bands, and in both cases it is known by the same name, *pi'iu* [cf. *pipi* (Toaripi), *bebeu* (Wedau), *pepeula* (Savo, Solomons) = butterfly].

10. *Mangeau*.—The two parallel lines extending from the *pi'iu* figure to the points of the shoulders and the angular markings on either side are called *mangeau*. This is probably the same word as the Waima *areau* and the Pokao *malegau*. I did not find that the word has any alternative meaning. The continuation of this double-line pattern to the navel shown in Plate IV, fig. 1, and the two double-line zigzags shown on the back in Plate IV, Figs. 2 and 3, are called, I believe, by the same name, *mangeau*.

11. *Aipa* is the Mekeo word for centipede, and the parallel zigzag lines tattooed under each breast in Plate IV, Fig. 1, are thus named. An almost identical pattern, also called *aipa*, is painted in Mekeo on perineal bands. This painted pattern is liable to be mistaken for another called *kiu* (elbow or knee), the difference between the two patterns being, perhaps, that the *aipa* zigzags are drawn with more acute angles than the angles of the *kiu* zigzags.

12. *Oi*.—The pattern tattooed immediately below the navel. It probably extends to the *mons veneris*. A design , also called *oi*, which is sometimes by inverted duplication made to form a cross, is a common figure in Mekeo carving. Variants of the carved *oi* are common on fish-forks from this district, and the same pattern is often worked into string bags. The word *oi* has no meaning in the Mekeo dialect other than that of a pattern-name. It seems not unlikely that the *oi* sound in the pattern-names *Koiokoio* (Waima), and *laudioi* (Pokao)—both of them spirals—is derived from the same source. *Oi* is possibly directly related to *Koki* (Maori) = angle, corner; *Koko* (Tonga) = bend or elbow; *Koki* (Mangareva) = crook [cf. the Mangarevan word *akakoki* = to make zigzags, *aka* being the causative; *Kokiri*

¹ In this argument I may have made more of the corresponding likeness of habits of these two birds than the case warrants, for on another *upu* in the same village I saw carved images of birds placed sitting in a row upon a suspended board, all of which had forked tails, and was told that they were *Kenge Kenge* (spur-winged plovers) (*Lobivanellus*), but it is significant that the tails of this species are also not forked. (See Plate xlv in *Melanesians of British New Guinea*.)

(Maori) = the name of a tattoo mark which appears to be a flying-bird convention; *Kokiri* (Raratonga), a diamond pattern mat design; *Koiko* (Mangareva = tattooing).¹

Pokao.

Such scanty information as I have of the tattooing patterns of this district was collected at Diumana, the chief village of the Nara tribe. Like their neighbours, the once powerful Kabadi tribe, the Nara people have become decadent and are fast dying out. A few old women were to be seen ten years ago whose wrinkled skins showed traces of rich tattooing, but the young folk are scarcely tattooed at all, and such designs as I saw upon their bodies were but rudely executed. I have no note showing whether the face was tattooed by the Pokao people, but I have one which states that the chin was never tattooed by them. From this it may perhaps be inferred that the face, with the exception of the chin, was tattooed.

13. *Diu*, meaning "elbow," was in former days, apparently, a common pattern at Nara. It consists of chevrons tattooed within four symmetrically placed rectangular panels. The pattern is worn on the stomach, the non-tattooed spaces between the four panels forming a cross with the navel as a centre.

14. *Akubou*.—The pattern called by this name consists of continuous zigzags drawn between two parallel lines. In Fig. 2 (p. 34) the *akubou* pattern is the upper part of the design: the lines forming acute angles below it are called *diu*. This compound figure is an armpit pattern. *Aku* in *akubou* may be the Pokao word *akua*, to strike, used here in the sense of striking or tapping the tattooing pigment into the skin.² In this case it is the same word as the Motu *hatua* and the Hula *aua*. (See verbs "to tattoo" in Vocabulary No. 1.)

Bou may possibly be the same word as the Motu *bou* = together, meaning that both parts of the compound figure are tattooed together, i.e., at the same time; but this I regard as unlikely: or it may be the *bou* in the Roro word *boubou*, "An evil spirit like fire."³

15. *Laudioi*.—This rectangular spiral figure is identical with the Waima tattoo pattern *koiokoio*, and at Pokao as at Waima it is tattooed on the legs. An intricate spiral design is burnt upon the surface of lime-gourds by some Pokao men, which is also called *laudioi*, but the spirals are curvilinear, not rectangular. (Figs. 4 and 5 (A).)

16. *Malegou*.—In this case also the pattern-name denotes a lime-gourd design as well as a tattoo pattern. (Figs. 3 and 5 (B).) The two designs, though they bear but little resemblance to each other, have one feature in common, namely,

¹ Further remarks on *oi* will be found under pattern No. 17.

² Cf. *e o aku* (Hawaii) = to prick (Andrews).

³ Seligman, *op. cit.*, p. 310.

the bisection of the figure by a space enclosed within two parallel straight lines. The tattoo patterns that I saw which were called *malegau* differed to some slight extent from each other and were very rudely executed, and it may therefore be that the operator was not a proficient artist, and failed to draw the pattern correctly. But this suggestion is to a considerable extent discounted by the fact that the rudely executed Pokao tattoo patterns bear a strong likeness to the Mekeo *mangeau* design, as well as to the Waima leg-pattern of which I have been unable to give the name. The words, too, *malegau* and *mangeau*, are so much alike that there can be little doubt but that they are variants of one word.

A few years ago some engraved shells were dug up in Collingwood Bay. These engraved designs¹ are sufficiently like the *malegau* and *mangeau* tattoo patterns and the Pokao *laudoi* lime-gourd pattern to warrant a comparison between them.

*Motu, Hula, and Sinaugolo.*²

As the tattoo patterns of these tribes are identical in form and only vary in name, they will be found put together in each case under one heading. With the Motu tribe are included the Lakwaharu and Gaile sub-tribal groups.

A few old men were still to be seen some years ago who bore upon their chests, backs, and the deltoid region of the arms, tattoo marks distinctive of having killed an enemy man or woman,³ but I have never seen a man of these tribes tattooed as richly as the old Motu chief Hila is said to have been by Finsch, who saw him in 1882, and who gives the following description of the markings.

"On his chest he bore a double obtuse-angled stripe like the *gado* pattern of the women, but with a serrated edge, and below this were two zigzag lines in the central line of the body extending to the navel. On his thigh he had a row of crosses. The pattern on the arms was similar to the arm-patterns worn by women."⁴

This description suggests that in former days the elders of the Western Papuo-Melanesian tribes, or, perhaps, the supreme chiefs only, were tattooed profusely, and that this custom in the case of men has nearly died out.

Facial patterns are very common on the young men of these tribes, and tattooing on the back is not rare. Finsch states that he saw young men tattooed with zigzag lines, but omits to state on what part of the body they were worn. He was informed that they inherited the right to wear them from their fathers. I have

¹ *On Prehistoric Objects in British New Guinea* (Seligman and Joyce), Plate viii, Figs. 5 and 6.

² Sinaugolo pattern-names are taken from British New Guinea Annual Report, 1893-94.

³ At Hula a fret pattern called *riuu* was tattooed vertically on either side of the centre line of the chest for having killed an enemy woman. Guise, in *Jour. Anthropol. Inst.*, vol. i. (N.S.), 1899, pp. 207-209, states that among the tribes inhabiting the mouth of the Wanigela river a boy is never tattooed until he has taken life or assisted in doing so, but in the same paper he states that certain tattooing known as *Rogena* or *Muravaputi* is worn on the chins of boys whose fathers have taken life.

⁴ *Decorative Art of New Guinea* (Haddon).

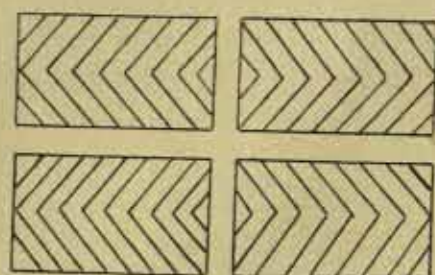


FIG. 1.
Diu. No. 13.

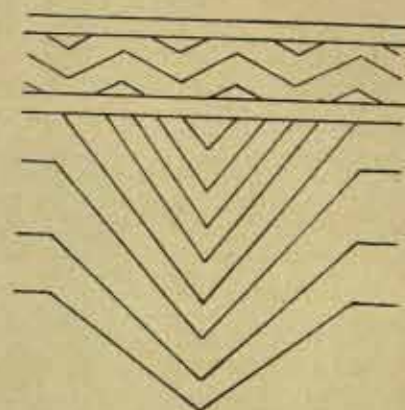


FIG. 2.
Akubou. No. 14.



(A)



(B)

FIG. 3.

(A) *Laudioi* on lime-gourd.

(B) *Malegau* "

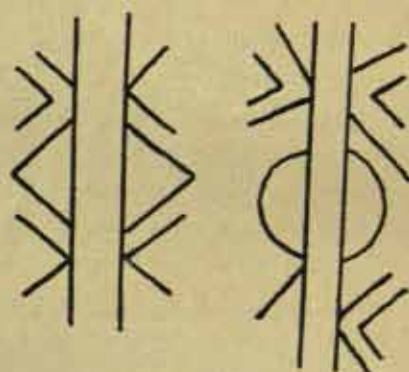


FIG. 3.
Malegau, No. 16.

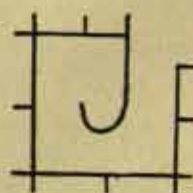


FIG. 4.
Laudioi. No. 15.

never heard this explanation given for the *neneva* (a zigzag pattern) which is sometimes worn on the back in present times, but it is quite likely that I never questioned natives on the subject. Until I saw Finsch's statement I had been under the fixed impresson that this homicide mark had been assumed by young men (who I knew had never thrown a spear in anger or self-defence) from a motive of mere vanity, and that it had been permitted to them to do so by the elders of the community in that spirit of carelessness which follows the breaking-down of native custom by foreign interference.

Youths of Hula occasionally wear a pattern tattooed on the deltoid region of both arms called *bina* (hornbill). (Plate IV, Fig. 4.) The single example I have of this Hula *bina* pattern is identical with a pattern which is commonly tattooed on the backs of the hands of females of the Motu group, called *dihudihu* (Motu), *diwu* (Hula). (Plate VII, Fig. 5.)

In *The Melanesians of British New Guinea*, Dr. Seligman has pointed out that the natives of Port Moresby have more than a usual proportion of Papuan blood in their veins as compared with the Lakwaharu and Gaile branches of the Motu tribe, and that this is due to the cross marriages which have taken place for generations between the Motu and the Koita tribes. The Koita speak a Papuan language, and they were undoubtedly a darker-skinned race than the Motuans when the two tribes first came in contact. The outcome of this blood fusion is that the Port Moresby Motuans are, on an average, darker-skinned than the other branches of the Motu tribe, and the result is seen in a degeneration of their tattooing art. This is evident not only in the lack of clearness and symmetry in the patterns tattooed, but also in the fact that the women find it difficult to recall the names of the several patterns.

17. *Kakiu* (Motu), *Tipu* (Hula), *Magani-gini* (Sinaugolo).—The Motu and cognate tribes tattoo this interesting face pattern with much variety of combination. (Plate V, Fig. 2.) It is also found eastward as far as Aroma and Mailu, though at the latter place it has probably been borrowed from their western neighbours. A somewhat similar pattern is tattooed on the feet and the lower part of the legs of the female children of *badi-taudia* and *dori-taudia*, i.e., the fore and aft captains of *lakatoi*, but it is only tattooed on the children of those captains who have made two or more voyages to the Namau district in the Gulf of Papua on trading expeditions. This marking is called *lakatoi dagina* (*lakatoi*=trading canoe; *dagina*=the mark or sign). (Plate V, Fig. 1.)

Attention may be drawn to a feature which is invariably present in the *kakiu* patterns, namely, the peculiar terminals. These terminals seem to indicate that the outside and inside vertical lines of the separated figures may originally have been continuous lines, in which case a whole series of disjointed figures would form the parts of a single figure; or alternatively that the design was at one time a woven pattern from which the tattooing pattern has been copied.

The Sinaugolo word *magani-gini* for this pattern means "fish-bone," but, in my opinion, this is a recent name which has been given to it owing to an imaginary likeness between one variation of the design and a fish's backbone.

The derivation of the words *kakiu* and *tipu*—the latter word being sometimes pronounced *tipu*—is very obscure. In endeavouring to trace their origins I have come across an apparent affinity of certain words which leads me to think that these patterns may have been evolved from the conception of an elbowed bird's wing, and that this bird is possibly a raptorial bird or a frigate-bird. The grounds upon which this suggestion is based are partly linguistic, and partly based on the fact that angular birds' wing patterns undoubtedly occur in carving, tattooing, and painting designs—not only in the art of some of the Melanesian-speaking tribes of South-eastern New Guinea, but also throughout Melanesia. We have already seen that the Waima frigate-bird design takes the form of a variety of angular figures; we have likewise seen that in Mekeo the *aemakiunga* pattern is very likely to be a flying-bird derivative and that it may have been evolved from a flying frigate-bird. It now remains to adduce philological reasons for attributing a bird's wing origin to the pattern under present notice.

The Motuans have three different words to designate the frigate-bird, namely, *kokobe*, *mukou*, and *kidukidu*.¹ The first of these words is more frequently used at Kapakapa, Gaile, and Tupuseleia, and is also the word for frigate-bird at Hula and Aroma. At Pari (a Motu-Koita village) *kidukidu* is generally used, while at Port Moresby the bird is commonly known as *mukou* by the Motuans and as *kiduka* by the Koitapuans. There can, I think, be no cogent reason against assuming that *kidukidu*=*kiukiu*, and the comparisons I shall give presently point to the probability of *ko* in *kokobe*, and *kiu* in *kiukiu* having one and the same meaning, namely, flexure, crook, bend, angle; and further, that among the Western Papuo-Melanesian tribes and in some parts of Polynesia, the frigate-bird as well as some other birds with long angular wings such as sea-gulls are named after this conception of something that is angular or curved—terms which in our notions are distinct though related, but which in the ideas of Oceanic peoples are apparently liable to become merged in a single conception.

In the languages of the Malays and the Dyaks both the roots *kiu* and *ko* occur, *siku* (Malay) and *sukuch* (Dyak) being elbow; and *bengkak* (Malay) and *bedikok* or *rikog* (Dyak) meaning crooked. In Madagascar *kiu*=elbow. In Western Papuo-Melanesian dialects *diu* (Motu), *diu* (Pokao), *digu* (Sinaugolo)=elbow, and *kiu* (Mekeo)=elbow or knee. In Southern Massim dialects *siu* (Bönabona, S. Cape, Sariba and Mukawa)=elbow.

¹ Cf. the following words for chicken-hawk or great hawk in two Alfur dialects of Celebes: *Kiokiok* (Tonsea) and *Kiongkiong* (Tontemboan), *Tontemboanach-Nederlandsch Woordenboek* (N. Adriani).

The *ko* root in words expressing curve or angle appears to occur less often in New Guinea dialects than in those of Indonesia and Polynesia, but the following doubtful instances in Motu may be mentioned: *kokia*=to gather by breaking, i.e., bending, a stalk (in contradistinction to *bulukia*, which apparently implies the gathering of fruit by means which entail no effort), and *makuku*=to crease, to wrinkle—which perhaps refers to the criss-cross appearance of creases or wrinkles.

Polynesian words containing the *ko* root are numerous, of which the following are a few instances, namely: *koko* or *koki* (Maori)=corner; *koko* (Tonga)=bend, elbow; *koko* (Marquesas)=to bend; *koki* (Mangareva)=crook, *akakoki* (Mangareva)=to make zigzags. Polynesian words containing the *kiu* root are somewhat rare. In Maori there is a word *kokeu* meaning curved, which is apparently made up of both the *ko* and the *kiu* root. In the Marquesas *kiu*=grasshopper, which may owe its name to the angular formation of its hopping limbs. *Kiu* seems to appear again in some words meaning bird's wing, thus: *pekehu* (Marquesas); and *ekeu* (Hawaii), of which the plural form is *ekekeu*.

In Oceanic languages, therefore, there occur *koko* and *koki*, words which definitely mean crook, curve or angle, and others such as *kiu*, *ekeu*, *diu*, etc., which mean elbow, knee, wing, and so forth, and which also apparently carry the meaning of crook or flexure.

There remains to be considered a small group of *kiu* words which mean bird, thus: *kiu* (Weda and allied dialects, S.E. New Guinea) and *kiu* (Santa Cruz). It is open to doubt whether the *kiu* word for bird has any connection with the word *kiu*, an elbow or bend. It is true that conventions of sitting birds on the prows of canoes in the Massim area and in other districts of the northern coast of New Guinea often take the form of a mere crook or elbow (see Plate LXIII in *Melanesians of British New Guinea*). But it would be straining the point overmuch to suppose that a common object like a bird took its name from a peculiarity in carved representations of birds, nor would it be admissible in one and the same breath to argue—(a) that because *kiu* means bend or elbow and *ekeu*, wing, that therefore the *kakiu* design may be a wing derivative, and (b) that because *kiu* means bird and because birds in profile are represented as crooks, therefore the *kakiu* tattooing design may be derived from a carved bird's profile.

There is, however, a possibility that in the Alfur languages of Celebes, Amboyna, Ceram, etc., *kiu*¹ may have been a name applied to a certain class of birds whose habit it is, as Yarrell says of birds of prey, "to sail in circles with its rudder-like tail by its inclination governing the curve," its wings meanwhile remaining flexed and rigid; and the name *kiu* for such birds may have been derived from *kiu*, meaning bent or curved, referring to a circular method of flight or to the bird's

¹ See footnote on p. 36.

flexed and rigid wings. It is furthermore possible that in a few dialects *kiu* came to be used not to denote a particular kind of bird, but any bird. Not only is *kiu* an occasional word meaning bird in Melanesian dialects (*cf.* *kioala*, etc.=black cockatoo, in vocabulary No. 2); but *ko* is also a very common prefix to bird names, especially in Polynesia, and *koko*, as was pointed out, frequently means "bend" or "crook" in the Polynesian dialects.

Turning now to frigate-bird names in Polynesia, these for the most part are words which appear to contain *ko* or *koi* roots, and I suggest that these are the same *ko* or *koi* roots which occur in certain words for angle, curve or crook, as well as in some Western Papuo-Melanesian tattooing pattern-names such as the Mekeo *oi*, the Waima *koio-koio*, and the Pokao *laudoi*. Working in a direction from east to west, the following words embodying the *ko* root mean frigate-bird: *kota'a* (Cook Islands),¹ *otaha* (Tahiti), *'atafu* (Samoa), *gataf* (Uleai, Cent. Carolines), *kandavu* (Fiji),² the *ko*³ sound becoming more and more indistinct until in the Solomons, New Britain, and the Massim districts of New Guinea, the Samoan *'atafu* and the Fijian *kandavu* shade off into *atawa*, *taula*, *dauta*, *daute*, *dawat*, *davasi*, etc. (see Vocabulary No. 2).

In New Zealand and in Eastern Polynesia *oi* or *koe* take the place of *ko* in frigate-bird names. New Zealand lies outside the southern limit of the habitat of this tropical bird, and there it is consequently a legendary bird. Maori traditions tell of a huge bird whose habit it is to fly high aloft—a bird that has black plumage tinged with yellow and green and with a bunch of red feathers on its head. Another account says that it was a long-winged bird that is supposed to soar in the heavens far above human vision, and to descend to shore at night to feed on shell-fish.⁴ This bird is called *hokioi* or *okioi*, and Sir W. Buller,⁵ the New Zealand ornithologist, states that in his opinion it is identical with the frigate-bird. In Mangareva the frigate-bird is called *mokoe*, a word which recalls the Motu word *mukou* for frigate-bird.

In *Gonzalez's Voyage to Easter Island*,⁶ a short description is given of one of the designs which the natives painted (? tattooed) on their bodies, and the account is amplified by the statement that the young people do not "paint" themselves in this fashion, but that a few of them have a collar of the same colour traced round the neck, and depending from it a figure of a small animal resembling a toad, or frog, which they call *cogè*. This word is possibly cognate to the Maori *koki*, corner, and the Mangarevan words, *koki*, a crook, *mokoe*, frigate-bird, *koiko*, tattooing. The description of the figure suggests an anthropomorphic design such as a *tiki*.

¹ *Cf.* *Kotaha* (Maori), part of a chief's head-dress (Tregear).

² *Eastern Pacific Islands* (Christian), p. 239.

³ *Gogo* in Samoan and at Efate means a sea-gull.

⁴ *Trans. of N.Z. Inst.*, vi, 64. The scarlet coloured throat-pouch of the male bird perhaps gave rise to the red crest of the legend.

⁵ *Birds of New Zealand* (Buller).

⁶ Hakluyt edition, p. 98.

In the art of Melanesia birds and men are not infrequently combined in the same figure, and there are occasional though faint signs which seem to indicate that in the eastern part of Polynesia there was a connexion, as expressed in art, between the abducted and semi-flexed arms of a human being, and the outstretched wings of a bird.

As an instance of the way in which certain angular symmetrical figures were apparently liable to become associated with frigate-birds by the people of an earlier period, the case of a marine bivalve (*Malleus spec.*) may be cited. This shell is called by the natives of Kiriwina, Trobriand Is., *daute* or *lai daute*, meaning "frigate-bird" or "reef frigate-bird." I took some trouble to ascertain whether there was any connexion of ideas in the minds of the natives of Kiriwina between *daute* the bird and *daute* the shell, but could not discover that they associated the two things. It has occurred to me since that the shell may have been named after the frigate-bird for the following reason, namely, that if a closed shell were opened and the two sides of it laid flat, the figure so presented would suggest that of a frigate-bird with outspread wings and a forked tail (see Plate V, Figs. 3 and 4).

Tattooing nomenclature in Indonesia, New Guinea and Polynesia contains the following words, some of which may possibly be derived from the *ko*, *koi*, and *kiu* roots.

Kaki (Bahasa tanah), *maki* (Vitu Island),¹ *diju* (Onjo, Collingwood Bay, S.E. New Guinea), *koiko* (Mangareva), *kaioi* (Marquesas) = tattooing or tattooed. *Gidju* (Marshall Is.), *Kakiu* (Motu), *tipu* (Hula), *diu* (Pokao) *gogo* (Samoa), *Koae* (Hawaii) = specific tattoo patterns, the last two being obviously representations of flying-birds.

18. *Ikoros*² or *korokoro* (Motu), ? (Hula), ? (Sinaugolo).

A type of face tattooing consisting of short strokes sometimes fringed on the outside, is known by the above names (*ikoro* at Port Moresby, and *korokoro* at Tupuseleia and Gaile), and the same words denote all fringing strokes which are so often added to some tattooing patterns in this district. The same words are used by the Motu tribes to denote carving. It may also be noted that *loro* (Koita) = tattooing. (Plate VI, Figs. 1 and 2.)

Tattooing nomenclature in Melanesia and Polynesia consists to a large extent of words which contain *olo*, *ulu*, etc., and the patterns under consideration perhaps belong to this category. Owing to the fact that words of this construction have several meanings which may potentially be used to explain the derivations of the several patterns in question, it is extremely difficult to classify them. Throughout

¹ If *maki* is a *kiu* derivative, which seems doubtful, then *mak*, which is a common word for tattooing in Northern Melanesia, is also probably derived from the same source.

² Cf. *Kolomiit* (Ceram) = tattooing. The face patterns of the inland tribes of Ceram consist of figures which appear to be flying-bird conventions. *Reisen in den Molukken* (Martin), pp. 51, 124 and illustrations.

Indonesia, Melanesia and Polynesia such words may equally well serve to mean hair or feathers, head, bird, flight, and oil. It will also be shown later that certain words meaning oil are identical with words meaning flight, and that oiling of the body is connected with tattooing ceremonies.

The commonest term for bird (in a generic sense) throughout Austronesia is *manu*, though here and there we find *roro* and *rovo* as bird nouns¹ which appear to be derived from the common Indonesian and Melanesian *rovo*, and cognate words, meaning "to fly." But whereas *manu* may in some dialects mean a crawling insect, or even an animal (as opposed to human creatures) *roro* and *rovo* words are definitely connected with the idea of flight or feathers. An equivalent of *rovo* in its sense of flight is *rere*, a word which is ubiquitous in that sense in Polynesia, but which in New Guinea Melanesian dialects appears more often in words for carving than in tattooing nomenclature. *Manu* occurs occasionally, though rarely, among tattooing terms in Indonesia, New Guinea (S. Massims), and Polynesia, but not as far as I know in Melanesia, and in New Guinea it never appears in words for carving used in a general sense.

The *rere* as well as the *roro* and *rovo* class of words used in tattooing and carving nomenclature appear to convey the sense of flight or wing rather than the conception of a visualized bird, which is borne out by such words as *vurere* (Wedau) and *maroro* (Maori and Tikopia) = flying-fish; and *bobokoro* (Siassi) and *lolo* (Madagascar) = butterfly. In Motu *roroho* denotes a large species of ray,² so named probably because of its wing-like fins, and of its habit of leaping from the water. In the dialects of Bahasa tanah and the Alfurs of Ceram, the following *olo* and *ulu* words mean wing: *ihollo*, *iholjo*, *tiholu*, *ihule*, *ihul*, *ihur*.³ In the Barriai (New Britain) group of dialects *roro* = to fly. In the Western Papuo-Melanesian dialects we have *roho* (Motu), *robo* (Roro), *lovo* (Hula), *lobo* (Aroma) = to fly. In Florida *lovo*, and in San Cristoval *roho* have the same meaning.

The question is whether *roro*, *rere*, and *rovo* in their sense of flight and bird have been derived from one and the same root, and secondly, whether these words are cognate to *olo* and *ulu*, words denoting feather—questions which must be left for philologists to determine.

We now come to words meaning oil. One of the customs or ceremonies in connexion with the final operations of tattooing consists of anointing the body of a tattooed person with oil. In a description of the *Kuiraga* section of the *Kapa* feast in Hood Bay, Guise writes as follows:—"The most important feast is the annual *Kapa*. It is during the celebration of this that marriages usually take

¹ Another "bird" noun, *Kiu*, has been discussed on pp. 37, 48.

² Cf. *roha* (Maori) = sting-ray.

³ *Mitteilungen aus den deutschen Schutzgebieten* (Friederici), vol. iii, p. 54.

place. On the second day the principal part of the ceremony called *Kuiraga* takes place, and many hours are spent on the toilet of the girls. They are freshly tattooed on the whole front of the body, especial attention being paid to the lower parts, as a girl who is untattooed there, or has but indifferent tattooing, possesses no attraction in the eyes of the young men. They mount the *dubu* and stand side by side; and on a given signal untie their petticoats and throw them behind them. Married women then advance and place in front of each girl a basket containing on top a few long yams, and a small knife, and beneath, a quantity of areca nut. An old woman now advances and anoints each girl on the breast and on the whole of the front of the body with melted pig's fat or coconut oil. They are now ready for the concluding ceremony. Two or three married women, or widows, seat themselves behind the girls and beat drums with slow and rhythmical measure. Each takes a yam in her left hand and the knife in her right, and at each beat of the drum cuts off a piece of the yam, bends her knees, and slightly bows her head, causing the weighted head-dress to sway forwards. . . . After each girl has cut up half a dozen yams, she, on the cessation of the beat of the drums, which is announced by two short taps, seizes the basket of areca nuts and pelts the crowd."¹

Marquardt² states that in Samoa when a party of youths had been tattooed: "A festive procession of the *tufuga* (priests) and their assistants took place with burning torches, accompanied by the smashing of a water vessel at the feet of the young chief, whereupon the ceremony of the *lulu'u* brought the whole act and the accompanying festivities to an end. This ceremony consisted of sprinkling by the *tufuga* with the milk of a so-called *niuui*³ coconut all those who had been tattooed.

The word *lulu'u* in the account of this Samoan ceremony is suspiciously like words of the feather, wing, and flight group, but *u'u* in Samoan means oil, and *lolo* in the same dialect means coconut oil prepared for making scented oil, while *lololo*=fat of pork. Cognate words in Polynesian dialects are as follows: *lolo* (Tonga)=oil, *roro* (Mangareva)=milk of coconuts, and *akarorororo* in the same dialect means to render soft, to soften. In Fiji *lolo*=milk of a coconut squeezed from the kernel when scraped, i.e., an oily substance. Brains of mankind, and, in some islands, of beasts were likened, apparently, to oil, thus: *roro* (Tahiti) brains of mankind but not of beasts; *lolo* (Hawaii) brains of man or animal; *roro* (Mangaia) brains.

I am unable to say whether similar words for coconut oil occur in Melanesia, but the Motu word for this substance, *dehoro*, may possibly be derived from the

¹ *Journ. Anthropol. Inst.*, vol. i (N.S.), 1899, pp. 207, 209.

² *Die Tätowierung beider Geschlechter in Samoa* (Marquardt), p. 12.

³ *niuui* (Samoa) = to sprinkle with the juice of *niuui* in order to make common. 2. To pardon. *ui* = to take off the *tapui*, i.e., tabu. *Ninalava* and *niuui* = two kinds of coconuts (Turner). It would be interesting to know whether these are two different species of coconuts or the same species in different stages of growth.

same root as the above-quoted Polynesian words, and another Motu word *horo*, meaning to anoint the head, is seemingly cognate to *dehoro*. The possibility of these Motu words being connected with Oceanic words meaning oil or fat would not be pertinent to this discussion but for the fact that in at least two instances there are words, apparently meaning oil, which enter into compound words or phrases having the meaning of non-tattooed. (a) In the Motu dialect the condition of being non-tattooed is called *kasiri vahoro*. *Kasiri* means raw, uncooked, and in duplicated form, *kasiri-kasiri*,¹ it denotes a red-brown colour, i.e., a dull red in contradistinction to *kaka kaka*, vivid red. Lawes gives yet another meaning for *kasiri* when used as an adverb with *abia*, *abia* being a verb meaning "to take hold of." *Abia kasiri*, he states, means "to catch unexpectedly, as a fish without a net," i.e., without preparation. The transition of the meanings of *kasiri* may therefore be from *dull red* to *raw* (indicating the idea of uncooked flesh) and from this to *unprepared*, and the original sense of the phrase *kasiri vahoro* (untattooed) may have been "unprepared for oiling." It is true that one cannot say definitely that *vahoro* is related to *dehoro*, coconut oil, and to *horo*, to anoint, though there is a presumption that such a relation exists. (b) In Mangareva the word for non-tattooed is *roro tea*, and this word is apparently compounded of *roro*, the milk of coconuts, and *tea*, meaning unpolished or dull.² Both these expressions for non-tattooed seem to associate the idea of unpreparedness with that of oil, and bearing in mind the oiling ceremony which takes place in certain localities when tattooing is completed, I am inclined to think that the original meaning of them may have been "unprepared for anointing with oil." Further light may be thrown upon this question when words meaning non-tattooed have been collected in Melanesian dialects.³

19. *Neneva* (Motu), *Geve* (Hula), *Mulavapuli* (Sinaugolo).—This pattern is usually worn on the back or the belly, and by the Gaile people it is sometimes worn on the face. (Plate VI, Figs. 3 and 5.) Men of the Motu group of tribes frequently have the *neneva* design tattooed lengthwise on either side of the backbone. In its simplest form the subject consists of two parallel lines zigzagging between marginal lines, thus forming a ribbon-like figure. The zigzags often assume a curvilinear form, but this is probably due to the difficulty entailed in marking clearly on the skin the points of the angles—a difficulty that can be easily imagined if it is borne in mind that the edges and corners of the pattern painted on the skin, to which the operator works, are more or less obscured by blood.

¹ Cf. *ili ili* (Api, N. Hebrides) = red; *ili* (Aroma) = ripe.

² *Tea* (Mangareva) also means white or pale, and *roro* (Mangareva) alternatively means head.

³ The Maori word for non-tattooed is *papatea*. Tregear suggests (see Dictionary under *papa* and *papatea*) that the word is derived from the Tahitian *papatea*, a title which was borne there by some of the principal chiefs, who were not tattooed.

The *neneva* pattern in its purest form is probably that variant of it which is burnt upon the surface of lime-gourds by the Kerepunu tribe, who are proficient in this art (see Plate XI, Fig. 167, in *Decorative Art of British New Guinea*, Haddon), a form which occurs too with great variety of detail in tattooing patterns, some of which are shown in the illustrations to this paper.

The origin of the pattern is obscure, but it may possibly be derived from the jaws and teeth of a crocodile, the projections representing the opposing teeth in the upper and lower jaw, and the zigzags the wavy line of the mouth or jaw-bones. The semblance is best seen in a variant of the pattern which occurs at Mailu and Bonabona (see Plate VI, Fig. 4c), where it is said by the natives to have been borrowed from Kerepunu. In Mailu this pattern is called *lepa*¹ and at Bonabona *kupa*. *Lepa*, or in the Dauï dialect *elepā*, denotes a particular type of wooden sword which is often made in the Southern Massim area with deeply serrated edges; these serrations perhaps represent the teeth of a reptile or a fish. A flat-bladed type of wooden stave called *lepe* at Hula, and *kaleva* by the Motu tribe, was formerly made by the Western Papuo-Melanesians. The edges of these staves were never serrated, but the faces of the blades were carved. I do not recollect, however, to have seen the *neneva* pattern among the designs carved upon these staves. Natives have informed me that they were reserved for use in village brawls between rival clans.

A pattern which appears to be a variant of *neneva* was tattooed on the chest of homicides of the Motu tribe in past days. A good illustration of this variant is shown on Plate XIV of the *Melanesians of B. N. Guinea* (Seligman). At either end of the pattern another design is tattooed which has the appearance of the dorsal scutes on a crocodile's tail. In both these patterns the design is duplicated, with a vacant space between the upper and lower halves.

The *neneva* design is also frequently carved on *dubu* posts in association with the serial pyramid carving called *kalakala*. The latter design almost certainly represents the horny squames on a crocodile's skin.²

Neneva has no alternative meaning in Motu. *Geve* (Hula) means feather: white feathers are frequently cut into zigzag shape for ornamental purposes by the Western Papuo-Melanesian tribes preparatory to being worn in the hair by males.

The Sinaugolo tribe—like the Motu and Hula tribes—tattoo this pattern, which they call *mulavapuli*, on both sexes: in the case of males it was in former days a homicidal mark. These people are said to believe that on the death of a person taking place a ball of fire, called *mulava*, appears, and *mulava* is also a name given by them to an evil spirit who is believed to possess the power of causing death.³

¹ Cf. *repa* (Tahiti) = cock's comb, i.e., a serrated thing, and *repa* (Mangareva) = tattooed.

² Cf. *Mel. of B.N. Guinea* (Seligman), p. 38.

³ British New Guinea Annual Report, 1892-93, p. 69. *ibid.*, p. 65. *ibid.*, 1893-94, p. 66.

20. *Ganagana* is a Gaile pattern-name for two distinct face designs and for a body marking. (Plate VII, Fig. 1.) *Gana* is the Motu word for the armlet woven of fern-fibre (*Gleichenia flagellaris*) which is invariably worn by both sexes of Western Papuo-Melanesian tribes on the upper arms. The variants of this pattern have perhaps been derived from patterns woven into *gana*, or the pattern-name *ganagana* may be derived from *kanage*, *kanakana*, etc., meaning a tern (see Vocabulary No. 2).

In one of my notebooks I find that a name given to me at Hula for this pattern was *manu karena*, which means bird's wing; but I am distrustful of the genuineness of this name. As far as I can recollect it was given to me by Gima, the then chief of Hula. He was a very clever but somewhat unreliable person, and it may be that he was quick enough to have detected some undercurrent of my thoughts at the time—even though the idea may not have been actually suggested to him.

21. *Toto* (Motu), *Roro* (Hula), *Koaru* (Sinaugolo).—These pattern-names all denote dot marks, such as the row of dots usually tattooed beneath the lower *gado* stripe, and outside the border lines of chin patterns. *Toto* (Motu)¹ means a sore. *Roro* (Hula) and *koaru* (Sinaugolo) are perhaps cognate to *alo alo*=tattooing, or to *alova* (Hula)=fire (cf. *lo* (Mekeo)=fire). It is not an uncommon custom among the Melanesian-speaking tribes of South-eastern New Guinea (e.g., Mekeo and the Trobriands) for women to burn indelible spots upon their skins by the application of a glowing ember (see left shoulder in Plate III, Fig. 2).

Dot patterns may originally have represented stars² or butterflies. The early people of Oceania perhaps associated bright coloured butterflies with shooting-stars and sparks—things which fly. Codrington states that the common word *pepe* for butterfly is not used in Motu to denote butterfly, but that they have the word in the sense that *pepe roworowo* means a flying spark.³

22. *Aiha* (Motu), *Aiva roa*⁴ or *aiva lele* (Hula), ? (Sinaugolo).—This pattern consists of two parallel lines, fringed on the outsides, extending from the corners of the mouth outwards towards the lower extremity of the ears. (Plate VII, Fig. 2.) *Aiha* and *aiva roa*=centipede (*Scolopendra*). The pattern is tattooed on both sexes. I was informed in Hula that this mark should properly only be tattooed on the cheeks of a chief's child.

23. *Ade revareva* (Motu), *Are aloalo* (Hula), ? (Sinaugolo).—These are terms which

¹ "Burning the persons of the mourners in spots with lighted rolls of *tapa*" was called *tutu* in Tonga. See *Natives of Tonga Island* (Mariner). Cf. *titotoi* (Barriai) = to make patterns on the skin by scarring (Friederici), *toto* (D. of York Is.) and *tot* (N. Ireland) = butterfly; and cf. *togi togi*, a term in Samoan tattooing nomenclature. In Samoan the dot over an "i" as well as the cross stroke of a "t" are called *togi* (Marquardt, *op. cit.*, p. 30). In Tonga, *tongi* = to carve, engrave (Mariner).

² Cf. *toti* (Aifurs of N.E. Celebes) = star; *toto* (Kilenge) = star; *titoi* (Saibai, Torres Straits) = star.

³ *Mel. Languages* (Codrington), p. 63.

⁴ Cf. *atua roa* (Samoa)=centipede, literally "long god."

include all chin patterns. *Ade* and *are*=chin, and *revareva* and *aloalo* respectively signify "tattooing" in the Motu and Hula dialects.¹ Though there is a great variety of chin patterns, I only came across one instance in which such a pattern was called by a particular name. It was worn by a girl of the Motu tribe and the name of it, *verihanai*, was given to me by an old woman—a tattooing expert in Port Moresby. The pattern itself is remarkably like an anthropomorph, or a reptile convention. The tattooing of chin markings by Western Papuo-Melanesians, though carried as far upward as the line of the lower lip, never extends to the actual surface of the lip.

24. *Bareko* is a Gaile pattern. It is similar to but larger than *kakiu*, differing from it mainly in that it is a true meander and generally has fringing strokes. I have seen it tattooed on the backs of the hands and on the sides of the body. An old woman at Gaile told me that this pattern is a copy of the markings left on the sand by hermit-crabs. (Plate VII, Fig. 3.)

25. *Ialata tarana* (Motu), *Pele* (Hula), ? (Sinaugolo). This is one of the commonest tattooing patterns of these three tribes, and it has many variants. (Fig. 6.) *Ialata* is a fish (*Naseus unicornis*) which is sometimes netted in large numbers in the shoal-waters about the barrier reef. A peculiar feature of this fish is the single horn which protrudes forward from its head, but this feature does not appear to have influenced the pattern. *Tara*² (*na* = definite article) denotes the sharp-pointed defensive weapon of which the fish has two—one on each side of and close to the base of the tail. *Tara* occurs often in the names of this fish in other dialects, e.g., *etara* (Fyfe Bay, S. Massim); *gabui wai wara* (Goodenough Is.); *Kuma taraga* (Maisin, Collingwood Bay): it is evident, therefore, that names for this fish are often associated with its *tara* or tail weapons. At Hula, Aroma, and Mailu the fish is called *gume* and *ume*, and its weapon is named *Kala* at Hula and Aroma, and *nadi* at Mailu [*nadi* (Motu) = stone]. *Kala* is also the term used in Hood Bay and at Aroma to denote the square miniature pyramids carved in series on *dubu* posts and on the under surface of dwelling-house boards: it also means in those dialects the square horny plates on a crocodile's skin.³ In the Sinaugolo and Motu dialects the same class of carving on *dubu* posts is called respectively *Kora*-

¹ For some interesting remarks on the significance of chin tattooing see *Journ. Anthropol. Inst.*, vol. xvii, 1888. The importance of chin tattooing may be associated with the importance of the lower jawbone, which is often worn in Melanesia as a relic of deceased kin by the natives. The lower jaw-bone was also prized in Polynesia (see *Polynesian Researches*, Ellis, Vol. i, p. 309 (1853)).

² *Tara* is a common word throughout Polynesia. Its general sense denotes something which is sharp-pointed. Thus *tala*, *tara*, *kala* (Samoa, Tahiti, Hawaii) = a thorn, the spur of a cock, etc., etc.; *tara* (Mangareva) a horn, a spine; and *aka tara*, to indent, notch, jag. It occurs again at Formosa, where *tarra* is a thorn-back fish. The New Britain word for osprey, *taragan* also contains *tara*, which in this case may have reference to the birds' talons, or to its sharp beak.

³ Cf. *tua tara* (Maori), a lizard god; spines on the back of a lizard (Tregear's Dictionary).

kora and *ikoro* or *korokoro*, and the same words *ikoro* and *korokoro* are used by the Motuans to denote all fringing lines to tattoo patterns.

In my endeavour to trace the source of the Motu tattooing terms *ikoro* and *korokoro* I suggested that they are derived from *do* or *ulu*, meaning feather: but the fact that *ikoro* and *korokoro* in Motu mean pyramid carving, which is called *kalakala* in Hood Bay, and that in Hood Bay *kalakala* means crocodile scutes and *kala'a* carving in a general sense, appears to render that suggested derivation very questionable. But *ikoro* and *korokoro* (Motu) do not only denote crocodile scute carving, for the words apply equally to carving in a general sense,¹ while in Aroma *alo alo* means carving, and *kala* crocodile scutes. *Alo* is more likely than *kala* to be cognate to the Motu *koro*, which has *tara* = *kala*.

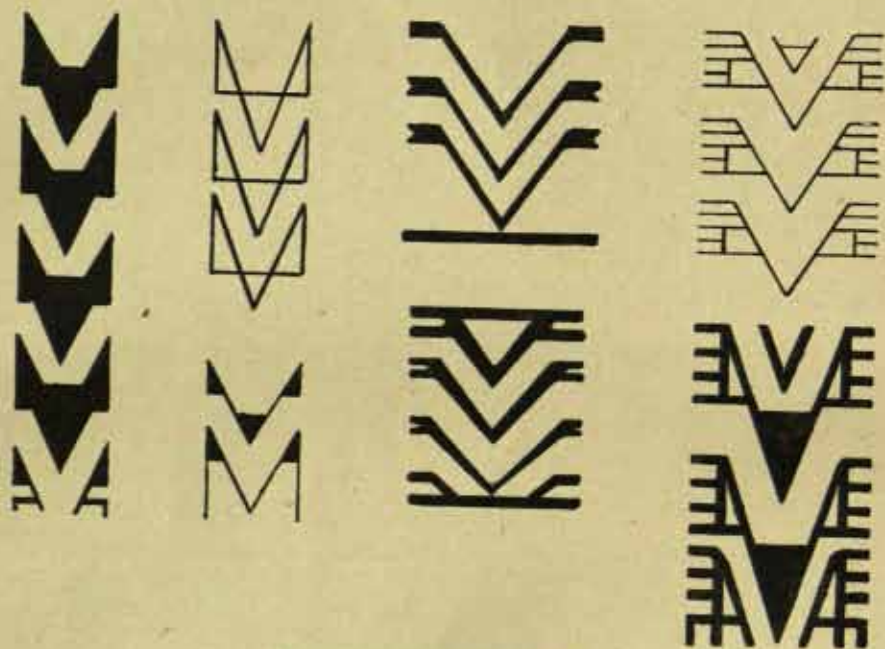


FIG. 6.—*Ialata tarana* variants.

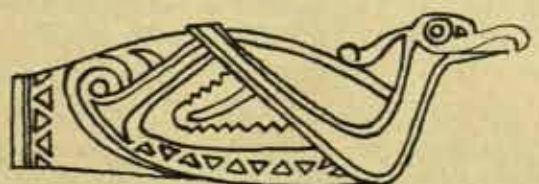
It is possible that the pattern takes its Motu name from the *tara* of the fish *ialata*, for both have a triangular shape, but as this name is purely local I incline to think it was given as an afterthought.

Pele, the Hula name for the pattern, affords no indication of its origin. The word at Hula and Aroma means chieftain, or in duplicated form, *pelepele*, a constrictor (carpet?) snake.

At Tatana—an islet near Port Moresby occupied by Motu people—the name given to this pattern is *lobu turia* = mullet's bone.

¹ *Ikoru tauna* (*tauna* = the man) means a skilful canoe-maker (Lawes). Canoes were made by scooping out trees with stone adzes, and these implements were also used for "crocodile scute" carving on *dubu* posts.

26. *Dihu dihu* (Motu), *Diwu* (Hula), *Bune goala* (Sinaugolo).—This pattern is tattooed on the stomach, the shoulder-blades, and on the arms and hands. (Plate VII, Fig. 5 and Plate VIII, Fig. 3.) *Dihu* (Motu) = *dibu* (Hula) = *digu* (Sinaugolo) = *ribu* (Aroma) = a wooden bowl of oval shape, often having blunt projecting ends. These dishes are generally used for holding cooked food. Wooden utensils of the same or similar shape are made in other parts of Melanesia (e.g., Admiralty Islands and the Solomons), and also in Micronesia, and are sometimes finished off with a bird's head carved at one end and its tail at the opposite end, the whole vessel thus forming the figure of a bird.¹ It is possible, therefore, that the Western Papuo-Melanesian blunt-ended oval bowls may be survivals of a bird-shaped prototype.



Bird and crocodile designs. (After Haddon).

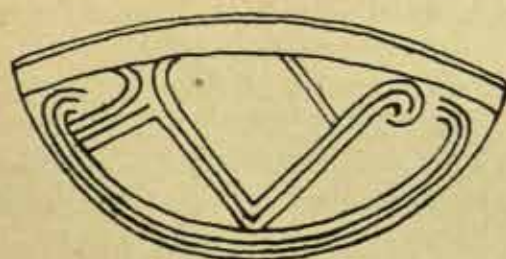


FIG. 7.—Pot design *Wamutufan*.

Another type of oval-shaped vessel—in this case made of earthenware—is manufactured by the Oian tribe in Collingwood Bay. On either side of these vessels a design is applied consisting of a two-angled zigzag figure terminating at one end in a coil. This type of vessel is called *saucaf* in the Oian

¹ Describing a Dyak ceremony, Ling Roth, quoting from Sir Spencer St. John, writes: "A curious custom prevails among the young men at this feast. They cut a coconut shell into the form of a cup, and adorn it with red and black dye. Into one side of it they fasten a rudely carved likeness of a bird's head, and into the other the representation of its tail," etc. *Natives of Sarawak and N. Borneo*, ii, 173.

dialect and it is used as a drinking cup. The design is called *wamutufan*, which means canoe-prow.¹ There are reasons for thinking that this Collingwood Bay pot-design is a degraded form of the "bird and crocodile" subject which was first described by Dr. Haddon. The affinity will best be seen by comparing the *wamutufan* design with the figures in Plate XII of *Decorative Art of British New Guinea*, especially with Figs. 185 and 189. I suggest that the turned-up snout of the fish or reptile is represented by the two upper lines of the left-hand parallels, the single line next below them which ends abruptly in space, the tongue, and the lower line the under jaw. The bird's tail is shown curving backwards towards its head just clear of the reptile's tongue. The remainder of the bird consists of the two parallel lines meeting in an angle at the base, thence springing upwards to end in a coil, which latter represents the head and beak. The whole bird rests upon a secondary design which suggests the outline of a canoe, and in this respect it compares closely with Haddon's figure 189. Whether the projection which slants back from the bird's neck to the band below the rim of the pot represents the wing-line of the bird, or its crest, is doubtful.²

At Kiriwina (Trobriands) oval-shaped clay pots³ are called *Kwaila sulu pwaia*. As far as I can remember these pots have no design marked on them, but the word *sulu* is suggestive of a wing or feather derivative. It is noteworthy, however, that the lime-spatulas of which the handles are carved in the shape of a note of interrogation and which are made chiefly (perhaps solely) at Vakuta—an island lying at the south end of Kiriwina—afford, apparently, another instance of the "bird and crocodile" design. (For an illustration of this type of spatula see *Decorative Art of British New Guinea*, page 238, Fig. 87.)

In discussing pattern No. 17 it was mentioned that *kiu* in at least two Melanesian dialects means bird. As there is reason for thinking that oval wooden dishes called *dihu*, etc., may originally have been carved in the shape of a bird, it is just possible that the word *dihu*, a dish, is derived from the word *kiu*, a bird, a suggestion which receives some support from the word for wooden dish on the Mambare river, namely *keo* or *teo*. Friederici gives the figure of a canoe-prow ornament which is common to certain tribes in the vicinity of Angriffshaven on the north coast of New Guinea—people who speak a Papuan dialect. This figure appears to be a highly conventionalized bird, and is called *din*, *deu*, etc.⁴ The dominant feature of the design is its crookedness, a feature so pronounced that it approaches nearly to a two-angled zigzag.⁴ But these reflections, though philologically they may be of some

¹ The illustration of a *sawaf* and the name of the design, with its translation into English, were given to me by the Rev. P. J. Money, a member of the Anglican Missionary Society.

² The presence of crests on the heads of canoe-prow birds in South Eastern New Guinea forms the subject of an interesting enquiry, but it would lead me too far away from the proper scope of this paper to discuss it here.

³ Round-shaped pots in Kiriwina have other names. ⁴ Friederici, *op. cit.*, vol. ii, 259.

interest in connexion with the pattern-name under notice, do not help us much in solving the question of the evolution of the pattern itself. I can offer but one suggestion, namely, that the *dihudihi* pattern represents a series of *dihu* dishes placed end to end as if seen in plan, and that it derives its name from the fact that the shape of a *dihu* dish is evolved from a bird-shaped prototype. It is a fact to be noted that *dihu* dishes are occasionally shown in plan carved upon *dubu* posts of the Koita Sinaugolo tribes—being merely oval-shaped depressions hollowed out of the side surface of the posts (Plate VIII, Fig. 1). It is clear, therefore, that the *dihu* dish had in the past a more than commonplace significance to the forbears of the people of these Western Papuo-Melanesian tribes; but what the nature of that significance was is as yet unknown.

The Sinaugolo term *bune-goala* is probably a compound word. *Pune* or *bune*¹ in several New Guinea dialects means the Torres Straits pigeon (*Myristicivora spilorrhoa*); *goala* may be *uala* = crocodile. In making this suggestion I do not mean it to be inferred that the Sinaugolo name for this pattern is related to the "bird and crocodile" design of the Massims, but at the same time I should not feel safe in summarily rejecting such a possibility.

27. *Kaia karo* or *kaia karoho*,² or *biobio*³ (Motu), *Kili* (Hula), *Biubiu* (Sinaugolo). All isolated crosses, namely, crosses which do not form part of the composition of larger figures, are called by these names. (Plate IX, Figs. 1, 2, and 5.) It is not clear in some instances whether the purpose of the tattooing operator was to represent a Maltese or a St. Andrew's cross. The choice depends upon how one visualizes the figure, whether as a positive or a negative. If the tattooed portion represents the intended design, the result is a Maltese cross, but if the untattooed portion represents it, a St. Andrew's cross is the result.

The most likely suggestion for the origin of these patterns is that they are derived from "star" or "butterfly." Cf. *Karokaro* (Fiji) and *koro* (Koiari) = star; *bobokoro* (Siassi) and *kaokao* (Toaripi) = butterfly; *alualu* (Samoa) = a kind of jelly-fish and also a star-like tattoo pattern worn by Samoan women⁴; *biu* (Aroma) and *gibu* (Sinaugolo) = star; [cf. *pipi* (Toaripi, etc.), *bebeu* (Wedan) *bebeula* (Savo), *molilip* (Jabim) = butterfly.]

Standing alone, the suggestion that these patterns are derived from stars would postulate one of three assumptions: (1) that the Western Papuo-Melanesians perceive rays emanating from heavenly stars and reproduce them in these patterns; (2) that the design has been inherited from a foreign people whose convention it was to

¹ This pigeon is one of the most important totem birds at Kiriwina in the Trobriand Islands. It is there known as *bubuna*.

² At Tatana this design is called *Kaiakaroho*.

³ *Biobio* (Motu) also means a charm carved in the shape of a crocodile head: these are made from a dried nut by the Gulf tribes and are worn suspended from the necks of males.

⁴ Marquardt, *op. cit.*, p. 4 and illustrations.

represent stars as figures with rays; (3) that the patterns are representations of starfishes, or some marine creatures having geometrical form, which are phosphorescent, and so are mentally likened to stars. On the other hand, the explanation may lie in a mental association of stars with butterflies. (See remarks under pattern No. 21.)

The tattooing of the people of Mangareva (Gambier Islands) consisted largely of crosses, some being white on a dark ground and others dark on a light ground. They were worn on the shoulder blades and on the deltoid region of the arms.

In Ceram tattooing is called *kolomiit*, and the commonest body patterns both of the coastal and the inland tribes are crosses. The inland tribes also tattoo on their foreheads figures which appear to be flying-bird conventions. (See footnote on p. 39.) Stephan, in his illustrations to *Südseekunst*, shows two figures of star-like form in the carving of the Barriai, said respectively to represent a star (*gigima*), and a starfish (*gigi rupu*). Maltese crosses are tattooed on the hands of women of the *Liukiu* islands.¹ Maltese crosses are represented in the art of the Kiwai tribe, Fly River [*Torres Straits* (Haddon), rubbing of a wooden comb, vol. iv, Fig. 346].

A kind of jelly-fish which is sometimes washed up on the sea beaches of the Gulf between Toaripi and the Purari delta has a clearly defined Maltese cross in its centre. The Biarui people call this jelly-fish *igo*. Questioned by me whether *igo* is an *uolare* (clan badge) in their tribe, they replied in the negative, but said that a figure in the shape of a Maltese cross is an *uolare* of the Venaripi and Lui-ipi clans.

28. *Gado* (Motu), *Aigolavu* (Hula), *Boaroko*² (Sinaugolo).—This is the V-shaped pattern called *mairi mairi* at Waima. (Plate IX, Fig. 3.) Like the Waima pattern it betokens marriage or betrothal. It consists always of two broad parallel lines extending from either shoulder and meeting between the breasts. The lower line is called *sinana* = the mother, and the upperline *natuna* = the child. This pattern when it occurs in smaller dimensions tattooed on the nape of the neck is called *gado gado*. *Gado* (Motu) = throat, voice, language, speech. The Motu word for neck is *aio*. *Aigolavu* is a composite word, *aigo* = neck and *lavu* = ? *Boaroko* is perhaps composed of two words: *boa* = tattooing at Waima and Mekeo, and *roko* a wing or flight derivative.

The betrothal tattoo patterns *mairi mairi* (Waima), *aieme* (Mekeo), *gado* (Motu), and *aigolavu* (Hula) evidently sprang from one and the same idea: they are tattooed in each case on the same part of the body, and they present but small degrees of variation. There appear to be some grounds for thinking (a) that these patterns are derived from, or are the counterparts of, crescentic pearl shell ornaments;

¹ *Cruise of the Marchesa*, p. 29 (Guillemard).

² The Annual Report of B. N. Guinea, from which the Sinaugolo patterns are taken, leaves it uncertain whether *boaroko* represents this or the next following pattern.

(b) that the crescents are flying-bird conventions; (c) that the patterns are, consequently, flying-bird derivatives.

In an earlier part of this paper it was mentioned that girls of the Waima tribe who have reached a marriageable age and whose tattooing has been completed saunter about their villages loaded with ornaments. Among these ornaments pearl-shell crescents are some of the most conspicuous, and are worn on the upper part of the chest and on the nape of the neck. The crescents are made from the large bivalve *Meleagrina margaritifera*, which shells are an article of currency from Mailu (the most easterly of the Western Papuo-Melanesian tribes) to the Aird river delta in the Gulf of Papua.¹ The shell in the rough and the finished ornament are called by the same name; at Waima and by the Motu tribe *mairi* = brightness, in Mekeo *kaka* [cf. *kakakaka* (Motu) and *kaka* (Mangareva) = red, any bright colour], at Hula and Aroma *alo* = sun (cf. *alova* = fire), and at Mailu *maire*. Pearl shell crescents invariably constitute part of the price paid for a bride by the Western Papuo-Melanesian tribes.

Occasionally, though rarely, crescent shell ornaments in New Guinea have angular projections on either side of the centre line on the convex edge. I have a note and a sketch of such a one seen at Nara. The projections are there called *posika*,² and my informants told me that crescents with projections had occasionally been made at Nara from time immemorial. These projections are certainly not due to accident, or to the mere whim of the maker; indeed, the extra labour involved in fashioning a crescent with projections may be imagined when it is borne in mind that the shape is obtained by grinding the edges of this extremely hard shell on a stone—an operation slow and laborious enough apart from the technical difficulty which must occur in breaking the outline of the curve in order to leave the spaces required for the projections, and finally completing the outline of the curve, and finishing off the projections.³

In Torres Straits pearl shell crescents are not infrequently found, made with projections, and there the projections are sometimes finished off in pronged shape.

In the Solomon Islands pearl shell ornaments worn suspended from the neck are made which undoubtedly represent frigate-birds or fish-hawks, and the tails

¹ In the Papuan Gulf they are worn as often by old and young men as by girls—never, I think, by married women. Among the Western Papuo-Melanesian tribes men sometimes wear them, girls (of all ages) often, married women seldom or never. The Gulf people grind the shells into a slightly different (fuller-shaped) form to that preferred by the Western Papuo-Melanesians. In the Massim districts pearl shell crescents are seldom, if ever, seen and have no importance.

² *Posika* probably denotes a small projecting object. Cf. *busi* = penis, and *busi busi* = clitoris in the Motu and Sinaugolo dialects.

³ If originally all these crescents were made with projections, it is easy to understand that the technical difficulty involved led to a simplification of design.

of these carved birds are there shown either as distinctly forked, or in crescentic shape, signifying, perhaps, frigate-bird and fish-hawk respectively.

The *gado* lines on the chest are often tattooed with conspicuous breaks symmetrically placed on either side of the figure, and it is possible, though very doubtful, that these breaks represent projections which in former days it was perhaps customary to leave on the convex edge of pearl shell crescents.

It is somewhat remarkable that a design, called in Sinaugolo by the same name as the *boaroko* tattoo pattern, is occasionally carved by the Sinaugolo people on their *dubu* posts. This design, however, though in outline somewhat like the chest pattern, differs therefrom sufficiently to render it very doubtful whether it has been copied from it. On the other hand it may be verbally related thereto, for (assuming that I am correct in assigning to the tattoo pattern-name *boaroko* a bird's wing derivation) this carved pattern may represent a pair of wings in another form.¹ If the carved figure is bisected by an imaginary vertical line drawn through the apex of its lower angle it will be seen that the two halves compare fairly closely with the Mailu and Dau'i frigate-bird forehead designs. (Plate V, Fig. 5.)

29. *Gado roho* (Motu), ? (Hula), *Boaroko*² (Sinaugolo).—Shortly before puberty all girls of these tribes are tattooed with a mark bearing this name in the middle line of the upper part of the chest and extending upwards to the underside of the chin. (Plate VIII, Fig. 2.) The patterns thus tattooed are usually No. 25 (*ialata tarana*) or No. 19 (*neneva*). The lower end of the *gado roho* mark is so placed that it will be above the inside of the *gado* angle when the time arrives later for that pattern to be tattooed. The pattern appears to correspond with the Mekeo *aema kiunga* motif (pattern No. 8), which I have suggested is a flying-bird convention. *Roho* (Motu) = *roko* (Sinaugolo) = *rovo*, etc. (Melanesian) = to fly.

30. *Kadidiha* (Motu), *Kariga* (Hula), ? (Sinaugolo).—These words mean armpit, and the designs, which show much variation, are actually tattooed within the armpits and extend outwards in fan-shape form to cover the outsides of the breasts. (Plate VIII, Fig. 4, and Plate X, Figs. 1 and 2.) The patterns are tattooed at an early age, and the operation is a very painful one, due to the sensitiveness of that part of the body. An examination of the etymology of the above words for armpit, and of some other words in Melanesian and Polynesian dialects denoting the same part of the body, e.g., *poaeae* (Tahiti), might perhaps throw some interesting light upon the origin of the strange custom of tattooing the armpits of women.

¹ Among some notes taken down in New Guinea by Dr. Seligman, which he has lent to me, I find that this carved *boaroko* (Sinaugolo) pattern sometimes encloses a design called *varica*. *Varica* is probably the Sinaugolo variant of the Motu word *ariha*, which means monitor lizard, commonly called iguana. Dr. Seligman notes that he saw such a compound design on the front left post of a *dubu* at Kwalimarupu in the Sinaugolo district.

² I am not sure whether *boaroko* (Sinaugolo) is the name of this pattern or of pattern No. 28.

Aroma.

Most of my notes on the tattooing patterns of this tribe have unfortunately been lost. The following account is written partly from memory, and as several years have elapsed since I left New Guinea, the list of patterns is incomplete.

Haddon—quoting Finsch—gives the following description of Aroma tattooing of women in his *Decorative Art of New Guinea* (1894).

“The tattooing at Maopa (Aroma) is wholly different from that customary among the Motu; for example, the characteristic chest-mark (*gado*) is lacking, and the pattern does not consist so much of single panels usually transversely disposed, but of longitudinally arranged figures which form over the entire body a bilaterally symmetrical whole from the forehead down to the soles of the feet. All portions of the body are tattooed. Another difference appears in the relative number of curved lines, though the main figures are in straight lines; crosses on a dark ground are very frequent. The pattern has not the letter-like character of the Motu; it is also far richer, especially on the face, where zigzag lines are more frequently seen, and, at times, oblique stripes on the cheeks. . . . On the whole, there are fewer young women already so completely tattooed as among the Motu, and still fewer children.”

It is not clear what Finsch means by the zigzag lines on the women's faces. Presumably he refers to the *kakiu* (Motu) pattern, which is a common facial tattoo mark in Aroma. Not infrequently this pattern is there tattooed in the form of a meander. It is known as *Ragela*,¹ which is also the Aroma word for the Motu native village settlement Poreporena (Port Moresby). The other facial markings are peculiar to Aroma, and are tattooed, I believe, after marriage, as is the case with the Waima women. They consist of broad parallel bands drawn vertically down the forehead from the scalp to the eyebrows; of broad lines extending from the lower lip downwards and underneath the chin; and of broad lines extending from the region of the ear to the upper lip and the chin. This style of face tattooing is very unsightly. (Plate XIII, Fig. 1.)

The curved lines which Finsch found relatively frequent were perhaps face patterns borrowed from Mailu. I have myself seen Aroma women bearing such Mailu markings, and was informed that Aroma girls were occasionally tattooed while on visits to that island.

I am under the impression that the tattooing of children begins at Aroma as early as in the case of the other Western Papuo-Melanesian tribes, and this seems to be borne out by the photographs of Aroma children shown in the illustrations. (Plate X, Figs. 3 and 4.)

The following are the names of some of the body patterns:—

31. *Nono-pelewa*.

¹ Cf. *raila* (Barriai, New Britain) = frigate-bird.

32. *Pau-alo*=*pau*, bamboo, and *alo*, tattooing.—This word clearly alludes to the style of burnt-in ornamentation on Aroma bamboo beheading knives, which the pattern resembles.

33. *Leka-alo*.

34. *Waga-kapu* = *waga*, dog; and *kapu* = ?—This is the same pattern as *kaiakaro* (Motu), *kili* (Hula); the Maltese cross pattern.

35. *Aivamele*=*aiva*, centipede; *mele*=*lele*=tattooing or carving in some dialects.

The men of Aroma are freely tattooed on the face with the *Ragela* pattern, and on the deltoid region of the arms with designs which they describe as *leka-alo*. It is difficult to know what the *leka* pattern is in simplified form. (See remarks under pattern No. 43.)

*Mailu, Bonabona and Dau.*¹

The Mailu tribe inhabits the coast line of the western side of Orangerie Bay, and the small island called Mailu lying off that coast. They speak a non-Melanesian dialect which contains, however, some Melanesian words, while many other of the words in their vocabulary are identical with those spoken at Domara in Cloudy Bay and the hill tribes living inland of that bay. Their social organization is that of the Western Papuo-Melanesian group.

The men of Mailu island are mariners. Their vessels, called *orou*, are constructed of dug-out canoes lashed together and their sails are cut in the crab-claw shape like those of the Aroma *lugumi* and the Motu *lakato*. They sail in fleets on trading expeditions both eastward and westward—eastward as far as South Cape, and westward to Aroma—thus forming the trade link between the Massim and Western Papuo-Melanesian areas. The merchandise they take on these occasions consists not only of articles which have passed into their hands from either area, but also of certain shell ornaments and clay pots manufactured by them on the island. Contrary to the method employed by all other pot-making Western Papuo-Melanesian tribes, the Mailu people build up their pots on the spiral system. The clay of which they are constructed is dug on the island. These pots are delicately made and are ornamented with designs incised within a broad band below the outward-curving brim, and the designs and their names correspond in some instances with their tattoo patterns. The Dau section of the Southern Massim make the same kind of pots.

¹ The names Mailu and Dau represent two ethnological groups, but I am not sure that the words are, properly speaking, tribal names.

Bonabona is an island at the mouth of the lagoon known as Mullins Harbour, and is sometimes called Magula on maps. The Bonabona people and the Dau group of tribes are Southern Massim.

Most of the Mailu tattoo patterns are identical with those used by the Dauï tribe; the small remainder are typical of patterns used by the Aroma tribe, their western neighbours. It seems probable that the Dauï tattoo patterns and the Dauï style of pot-making have been borrowed from them by the Mailu tribe, but this assumption is so far open to objection that if the patterns have been borrowed we might expect to find the names of tattooing and pot patterns borrowed also. This, however, is not the case. In only one instance, as far as my knowledge goes, is there a tattooing pattern used by both groups which bears a common name, this being the nose marking called *enari*, meaning lime-spatula. It is remarkable, too, that the name of at least one Dauï tattoo pattern has been translated into the Mailu dialect, namely, the Dauï pattern *davasi* = frigate-bird, which at Mailu is *aisava* = frigate-bird. The same thing is found in their pot ornamentation designs, each having a frigate-bird design called *davasi* in Dauï and *aisava* at Mailu; and another pot design which is called *budi budi* in Dauï is called *nogara* at Mailu, both words meaning "cloud."

The Dauï group of tribes inhabit a short piece of coast-line of which South Cape may be said to be the centre; Rogea and Sariba Islands, lying close to the coast; and Wari (Teste Island), the Brumer Islands, and the Engineer Group (Tubetube) lying further to seaward. I am not sure whether Basilaki and Moresby Islands are also within the Dauï area.

Tattooing is called *taro-taro* at Mailu; *uri-uri* or *ai uri* in the Dauï district; *kuri-kuri* at Bonabona; and *laulausi*¹ at Wari (Teste Island). The designs are tattooed in fine strokes, the body patterns being always enclosed between long vertical parallel lines, thus presenting a marked contrast to the tattooing of the Western-Papuo-Melanesian tribes.

The men of these tribes occasionally wear curvilinear designs on the chest, and an illustration of a rare design is given (Text-fig. 9 (3), p. 63) which I saw on the chest and upper arm of a Bonabona man. At Mailu the males sometimes have a figure tattooed on the deltoid region of the arm. They were apparently unable to give me the name of this pattern, for a note in my sketch-book states: "On being asked whether called *bina* they say it is, but this requires corroboration." Dr. Seligman, writing of Tubetube, states that "at the present day many of the younger men and boys who have been away working have a few tattoo marks upon their chest, arms, or cheeks. These are generally some form of the common south-eastern scroll pattern, but of old no male was tattooed except for sickness. Women, on the other hand, were always tattooed profusely. . . . A girl's face would be tattooed some time before puberty, but usually after her nose had been pierced, the scalp and neck apparently not being touched. Nothing more is done until the girl reaches puberty, when the chest, belly, flanks, arms and hands are tattooed after the first

¹ Cf. *laulau* (Paluan, Admiralty Is.) = tattooing (Friederici).

catamenial period. . . the tattooing of the parts of the body being treated in the order given above. There are no special marriage or betrothal marks, and there are apparently no feasts connected with the process of tattooing."¹

36. *Aisava* (Mailu), *Hage* (Bonabona), *Davasi* (Daui).—*Aisava* and *davasi* both mean frigate-bird, and I believe that *hage* has the same meaning. The pattern represented by these names does not vary, and is invariably tattooed on both sides of the foreheads of the women of these tribes. It consists of two parallel lines forming a double-angled zigzag on either side of the central line of the forehead, terminating at the upper end in a coil. (Plate XIV, Figs. 1 and 2.)

In discussing the Motu *dihu-dihu* pattern I alluded to a pot design in Collingwood Bay and suggested that the latter is a degraded form of the "bird and crocodile" design. It is possible that the frigate-bird pattern now under notice when combined with one of the next two following patterns (Nos. 37 and 38) is another instance of the "bird and crocodile" idea. The indications, however, are very faint, and I therefore make the suggestion with reserve. In both designs there is an identical representation of what I take to be the bird's head, namely, the terminal coil, but in the tattooed figure the bird is shown without a crest, which is a correct omission in the case of frigate-birds.

On the other hand, it would be rash to exclude the possibility that this frigate-bird design may represent the outspread wing of a frigate-bird—notwithstanding its likeness to the Collingwood Bay *wamutufan* subject—for in the art of New Ireland two-angled zigzags as well as three-angled zigzags are called *daula*=frigate-bird²; and in Waima tattooing both two-angled and three-angled frigate-bird conventions occur. The chief objection to assigning to this forehead pattern a wing derivation is the terminal coil, for a coil in Massim art is very characteristic of a bird's beak.

37. *Bake* (Mailu), *Matakiriri* (Bonabona), ? *Silo* (Daui), ? *Matagadigadi* (Teste Island).—Turning back now again to the Collingwood Bay *wamutufan* pot design it will be seen that the nose of the suggested reptile convention in that design is shown by two lines curving upwards and backwards. This feature corresponds with the upper two-lined hook in the *bake* pattern, but the lower hook in this pattern presents difficulties which I cannot account for. On some Daui women's faces there is tattooed on either cheek immediately beneath the eye a figure which is almost certainly a bird convention seen in profile, and, if the *bake* pattern is actually a reptile's mouth convention, it may be that this bird, and not the frigate-bird on the forehead, forms the counterpart of the compound design. In this case the serrations on the upper line of the jaw pattern (*dalo daloloia*) which is a continuation of the *bake* pattern, may represent the teeth of the crocodile or shark.

¹ Seligman, *op. cit.*, p. 493.

² *New Mecklenburg*, Stephan und Graebner, Plate i, No. 3d and No. 4a.

Bake may be derived from *bakea* (Mailu)=shark. *Matakiriri* and *matagadigadi* are evidently compound words, *mata* meaning eye; but I do not know whether *kiriri*¹ and *gadigadi* have any alternative meaning. The Dauí *silo* has no other meaning in that dialect. (Plate XIV, Figs. 1 and 2.)

38. ? (Mailu), *Matakodo* (Bonabona), ? (Dauí).—This is the bird convention worn under the eye, which was referred to under pattern No. 37. If absent its place is taken by the *bevai* pattern (see pattern No. 42). *Mata*=eye, *kodo*=?. (Plate XIV, Fig. 2.)

39. *Enari* (Mailu), ? (Bonabona), *Enari* (Dauí).—This pattern, which is tattooed from the forehead to the tip of the nose, is subject to at least one variation, and there may be more. The commonest variety consists of threefold parallel straight lines without additions: another variety is more ornate, the outside lines being fringed by strokes pointing upwards and curving into hook-form at the top, while the centre line is cut short by a line at right angles to it ending in pendant hooks at either end, and having short fringing strokes on its upper surface. In this form the *enari* mark is reminiscent of a highly conventionalized reptile motif, and as the hooked ends point towards the forehead frigate-bird conventions it may possibly be another instance of the "bird and crocodile" design. *Enari* (Dauí) = lime-spatula.

40. ? (Mailu), ? (Bonabona), *Subanomnom* (Dauí).²—Short vertical strokes tattooed on the upper lip. *Suba* (Dauí) = lip, and *nom* (Dauí) = drink, and the compound word is said to mean drinking-water as distinct from salt-water. *Sobanomnom* (Sariba: S. Massim) = upper lip (see B.N.G. Annual Report). An alternative marking for the upper lip is a single curved figure known at Mailu as *boebua*. *Boe* is possibly cognate to *boi* = reefheron, or it may be *bo'i* (Mailu), a ghost or spirit. [Cf. *bogibada* (Motu) = fish-hawk.] (Plate XIV, Fig. 2.)

41. *Gumai* (Mailu), *Gumagumani* (Bonabona), *Dalodaloloia* (Dauí).—These words specify the four-fold parallel lines from ear to mouth enclosing zigzags, as well as the two-fold parallel lines enclosing like zigzags, extending from the neck to the inner sides of the breasts, and from there to the girdle pattern. The terminating S curve to the upper parallel lines of the face pattern, where they curl inwards to the *alae nasi*, is called in Mailu *boe* (cf. *boi*, Mailu = reef-heron, see suggestion under pattern No. 40). (Plate XIV, Fig. 2.)


Gumagumani (Bonabona) is said to mean hermit crab. *Gumai* (Mailu) is probably the same word in borrowed form. The canoe builders at the island Panacati in the Louisiades carve a design on their canoes which they call

¹ Stephan, in *Südeekunst* (Plate viii, Fig. 1b), gives a carved bird figure from Siassi Is., called *sillili*, which he states is a small beach-bird. In the Wedau dialect *ktiviv* means "any kind of sand-bird." *Wedau Grammar and Dictionary* (Copland King).

² Cf. *nomnom* = tattooing at Lou Is., in the Admiralty Group (Friederici, *op. cit.*, vol. ii, 226), but this word may have some connection with *monmon* in the same dialect, which means "bird."

guguman, and this word, also, I was informed at Panacati, means hermit-crab. The carving motif, however, bears no resemblance to the tattooing motif. *Guguman* and *gugumani* are almost certainly cognate words. But *guguman* may be *koko manu*, and *kokomanu* construed by the *Koko* key (see remarks under pattern No. 17) may mean frigate-bird, and both these so-called hermit-crab patterns bear strong resemblance to bird conventions.

Dalodaloloia recalls the Mailu term *tarotaro* = tattooing. Relying on the assumption that the Mailu tattooing patterns have been borrowed from the Southern Massim, it is puzzling to find this Western Papuo-Melanesian word [*alo alo*, (Aroma and Hula) = tattooing] in Southern Massim tattooing nomenclature. The repeated zigzag which forms the dominant feature of the *dalodaloloia* pattern is (as I have just pointed out) characteristic of a Southern Massim frigate-bird convention (see remarks under pattern No. 36, also Plate XIV, Fig. 1). In the Wedau dialect *gugudaro* = frigate-bird. Here we have in a Southern Massim dialect "*taro*" in a non-duplicated form tacked on to *gugu* (cf. *koko* = seabird and frigate-bird). *Taro*, as I suggest later, may mean the spirit of a dead man: *gugudaro* may therefore perhaps be a compound word denoting a bird which is a host of the spirits of dead men. *Dalodaloloia* has no alternative meaning.

42. *Bevai* (Mailu), ? (Bonabona), ? (Dau).—The threefold parallel lines running obliquely across the cheek from the last discussed pattern towards the middle or upper part of the nose. For these lines there is sometimes substituted another figure (apparently a bird profile) of -like form called *matakodo* at Bonabona (see pattern No. 38). The Mailu word *bevai* is probably the same word as *bevai* (Aroma), which is one of two words I was given at that place to denote tattooing in a general sense. A similar word meaning tattooing and carving—*berai*—occurs at Seremina, a small hill tribe¹ living near the head waters of the Kemp-Welch river. The word in either case is, I think, cognate to *bela bela* (Sinaugolo) = tattooing. (Fig. 8A.)

43. *Lepa* (Mailu), *Kupa* (Bonabona), *Elepa* (Dau).—At Mailu one of the *lepa* designs is identical with the Bonabona *kupa* patterns, which I have assumed to be related to the Motu *neneva* pattern. (See remarks under pattern No. 19); but the Mailu people also gave me the name *lepa* for another figure which I saw tattooed on the back of a girl's hand. At Bonabona also there is an alternative *kupa* design which is distinct from the above-mentioned pattern, and at this island I was informed that two debased spirals I saw tattooed on the back of a woman's hand are called *lepa*. At Rogea Is. (Dau Dist.) there are at least two distinct designs called *elepa*, one of which appears to belong to the birds' heads scroll subject long since described by Dr. Haddon. I have already mentioned that *elepa* (Dau) [called *Kerepa* (Bona-

¹ This tribe, who speak a non-Melanesian dialect, show signs of Sinaugolo culture, as evidenced by their carved *dubu*.

bona)] is a wooden club often made with toothed edges. These clubs are generally ornamented with some pattern or other carved along the median line of the blade, and it is possible that the variety of tattooing designs called by these names may be due to the variety of patterns carved upon the clubs. But as *lepa* means head at Aroma and at Kerepunu, and as the Mailu people aver that some of the *lepa* patterns have been borrowed from the latter place, it is possible that the word may be connected with "head," for the reason that it may have been the custom of the Kerepunu tribe in former times to ornament skulls with certain designs. It was certainly the former custom of both these tribes to exhibit skulls on their *dubu*.

44. *Tomoinau* (Mailu), ? (Bonabona), *Karikarihei* (Dau).—The twofold parallel lines enclosing angular hooked figures, running vertically on either side of the median line of the trunk from neck to girdle pattern, are so called. *Tomoinau* = ? hermit-crab's footmark. *Karikarihei* = centipede. (Plate XIV, Fig. 1.)

45. *Urubobo* (Mailu), *Binagara* (Bonabona), ? (Dau).—In Mailu this pattern consists of twofold parallel lines extending from the shoulder to the girdle enclosing U-shaped figures: the same pattern is called *binagara* at Bonabona, where I have seen it tattooed on the inner side of the arm. Both these pattern-names appear to be compound words. *Uru* may possibly mean "head" or "feather," for *kuru* (Bonabona) = head or skull, and *uru* (Mailu) = feather. *Bobo* standing alone has, I believe, no meaning in these dialects, but *bobo* is perhaps cognate to *bebe*, *pepe*, *papa*, etc., which seem to imply a conception of wing or flight [cf. *bobo* (Barriai), *bobokoro* (Siassi) = butterfly¹; *boboro* (Motu) = hornbill].

Binagara may be *bina* = hornbill and *nagara* (S. Cape) = head or ? skull, the intermediate *na* having dropped out. The U-shaped figures may represent the corrugations on the upper mandible of a hornbill. In hornbill carving designs at Waima these corrugations are made V-shaped, but U-shaped figures represent the corrugations more accurately than V-shaped ones.

46. *Bunaru* (Mailu), ? (Bonabona), *Mora* (Dau).—The twofold parallel lines enclosing rectangular figures extending from the inside of the right shoulder to the outside of the breasts and so down to the girdle. *Bunaru* has no alternative meaning, but *mora* is the Dau word for a string-bag. The Rogea Island people maintain that this pattern is not copied from designs woven into such bags, but that it is so called because the *mora* is slung over the right shoulder. (Fig. 9 (1).)

47. *Motamota* (Dau).—A forehead pattern consisting of a horizontal row of chevrons tattooed from temple to temple. *Motamota* (Dau) = caterpillar or grub; literally, little snake. (Plate XIV, Fig. 2.)

48. *Boi sipasipa* (Dau).—A shoulder pattern enclosed within marginal converging lines which end in a point just above the armpit. The designs enclosed within the lines are two-angled zigzags in the upper part, and rectangular hook-shaped figures

¹ Friederici, *op. cit.*, vol. iii, pp. 67, 130.

in the lower part. The word has no alternative meaning; if—as seems likely—it is a compound word, *boi* may be reef-heron (see Vocabulary No. 2), but perhaps it is *bo'i* (Mailu), meaning the “spirit which dwells in the severed and preserved skull.”¹ In the Motu dialect *bogi-bada* signifies fish-hawk [*bogi* in this word is often pronounced by the Motuans with a break like the Mailu *bo'i*; *bada* (Motu) = great]. *Sipasipa* = ? The upper part of the design appears to be a “wing” convention and the lower part may represent claws: the whole design therefore may be connected with the idea of a fish-hawk. (Fig. 9 (1).)

49. *Manibobo* (Bonabona and Dau).—A shoulder pattern within marginal converging lines which is worn on the exterior side of, and next to, *boi sipasipa*. It is also worn sometimes on the inner side of the arm from shoulder to wrist. *Mani* is probably *manu* = bird; for possible derivation of *bobo* see pattern No. 45. *Mani* in this word may have the sense of “insect.” *Mani* (Tubetube) = bird, and *manikikiuli* in the same dialect, which is akin to Dau, is butterfly, literally, “little bird feather.”² (Fig. 9 (1).)

I have seen a very similar design carved upon a board in an *upu* (clubhouse) at Inawabui, one of the Mekeo villages, which was probably a *kangakanga* (clan-badge) of that *upu*. The Inawabui natives told me that its name was *lailai*, but this word I ascertained afterwards merely means “board” in the Mekeo dialect.

50. *Kadewa-munana* (Bonabona and Dau).—This trifid pattern is worn between marginal lines extending from the shoulder to the girdle. In Rogea Is., I have seen it worn on both sides of the body. It is evidently the same design as that which Finsch called a “clover-leaf pattern.”³ *Kadewa* (Sariba Is.) = dog, and I am under the impression that I was informed at Bonabona that the design represents a dog's footmark. It will be remembered that the Aroma cross pattern *waga-kapu* (No. 34) is also perhaps associated with a dog. (Fig. 9 (2b).)

51. *Karawabitu* (Bonabona), *Wabitu* (Dau).—Horizontal strokes tattooed between vertical lines and worn on the belly below the girdle. *Wabitu* (Dau) is the name of a fish. (Fig. 9 (1A).)

52. *Murumurua* (Bonabona), *Sinauri* (Dau).—This pattern is worn on the back. It springs on either side from the girdle alongside the spinal column to the shoulder blades and from there curves outwards and extends down the outer sides of the arms. *Murumurua* (Bonabona) is said to represent bananas [cf., *murumurua* (Wedau) = banana var. Cavendish (Copland King)], and the pattern *sinauri* (Dau) is said at Rogea to be the markings on a snake called by that name. (Fig. 8 (4).)

¹ *The Natives of Mailu* (Malinowski), p. 653.

² Ray in *Expedition to Torres Straits*, vol. iii.

³ *Tätowiren* (Joest), p. 41, and illustration. This illustration of a tattooed woman of Rogea Island is very misleading. On p. 116 of Joest's book, Finsch states that owing to the aversion shown by the women to his sketching their tattoo-patterns he had great difficulty in doing so. This difficulty probably accounts for the imperfections in the illustration.

53. *Motaiiaia* (Dau).—A continuous zigzag design between parallel lines curving from the deltoid region inwards to the armpit. The natives say that the pattern is taken from the markings on a snake called *motaeau*. It is also worn on the sides of the body between marginal lines extending from the region of the armpit to the girdle. (Fig. 9 (1).)

54. *Bisai*.—A Bonabona body pattern. (Fig. 9 (1).)

55. *Memenawa*.—A Bonabona belly pattern. I was told that the word denotes a dwarf species of pandanus which is cultivated by the natives and used by them for the purpose of making *rami* (grass petticoats). (Fig. 9 (1).)

Cape Vogel, Collingwood Bay, and Cape Nelson.

The tribes inhabiting the coast line from the eastern extremity of the mainland to Cape Vogel do not practise tattooing, though they all have words to denote it. Beyond Cape Vogel, and as far as, and including, Cape Nelson, the females of most of the coast tribes are tattooed, but only on the face and the forehead. The men are never tattooed. The tattooing patterns of the Iasi-iasi tribe near Cape Vogel and the Kworafi tribe on Cape Nelson are alike—these two places being the south and north extremities respectively of Collingwood Bay, some forty miles apart. These patterns consist of combinations of straight lines, zigzags, concentric circles and spirals.

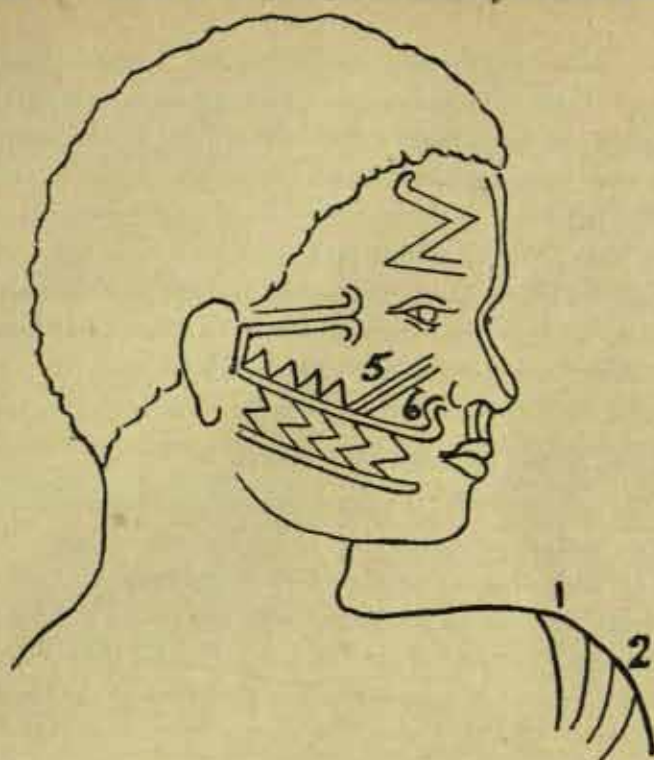
In the bight of Collingwood Bay lives the populous Maisin tribe. The faces of the females of this tribe are tattooed in great variety of pattern all bearing a general similarity to the patterns of the Kworafi and Iasi-iasi people.¹ (Plate XV, Fig. 1.)

Unfortunately I lost the few opportunities that presented themselves whilst I was in New Guinea of obtaining any particulars of the tattooing customs of these tribes, or of the individual names of the several patterns.

At a gathering of Cape Nelson and Collingwood Bay tribes which I convened in 1905, I observed a man with a design painted on his cheeks in red pigment. Upon being questioned what the name of the pattern was he promptly replied *atawa*, which in the dialects of Kworafi and Maisin means frigate-bird. I cannot now recall to mind which of these two tribes the man belonged to, but the incident affords positive evidence that frigate-birds are represented in the art of these people. The photograph (Plate XV, Fig. 2) which I took at the time shows that the convention is very similar to the frigate-bird conventions at Mailu and Dau.

¹ The Maisin people are proficient at burning patterns upon bamboo smoking pipes. They call this style of ornamentation by the same name as that for tattooing, namely *buwa*.

The Arifamu and Winiapi tribes, who occupy part of Cape Nelson, do not tattoo: they both speak Melanesian dialects. Their words to denote tattooing (see Vocabulary No. 2) appear to be cognate to words having the same meaning in the Trobriands and Woodlark Island (Murua).



A

A. Daui woman's face.

1 and 2. Name not
ascertained: detail
shewn in B1 and B2.

5. No. 42. *Bevai*.

6. No. 41. *Boe*.

B. The same woman's
body.

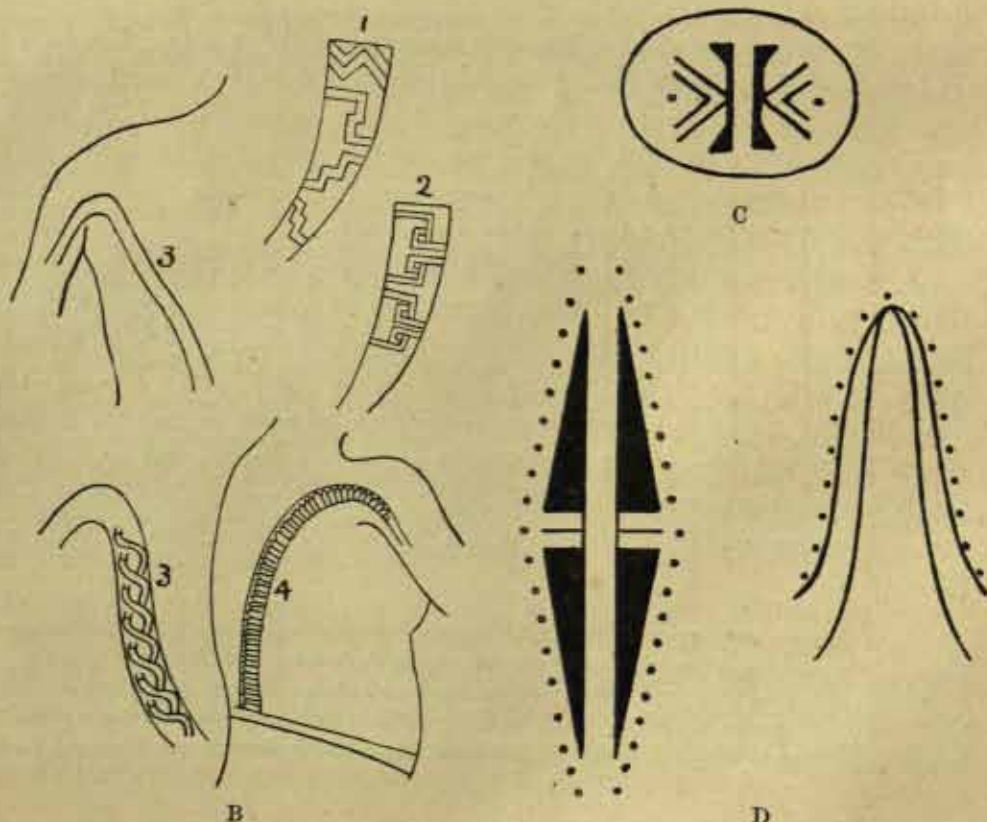
1 and 2. Detail of A1
and A2.

3. No. 43. *Elepa*.

4. No. 52. *Sinauri*.

C. Mailu hand pattern.

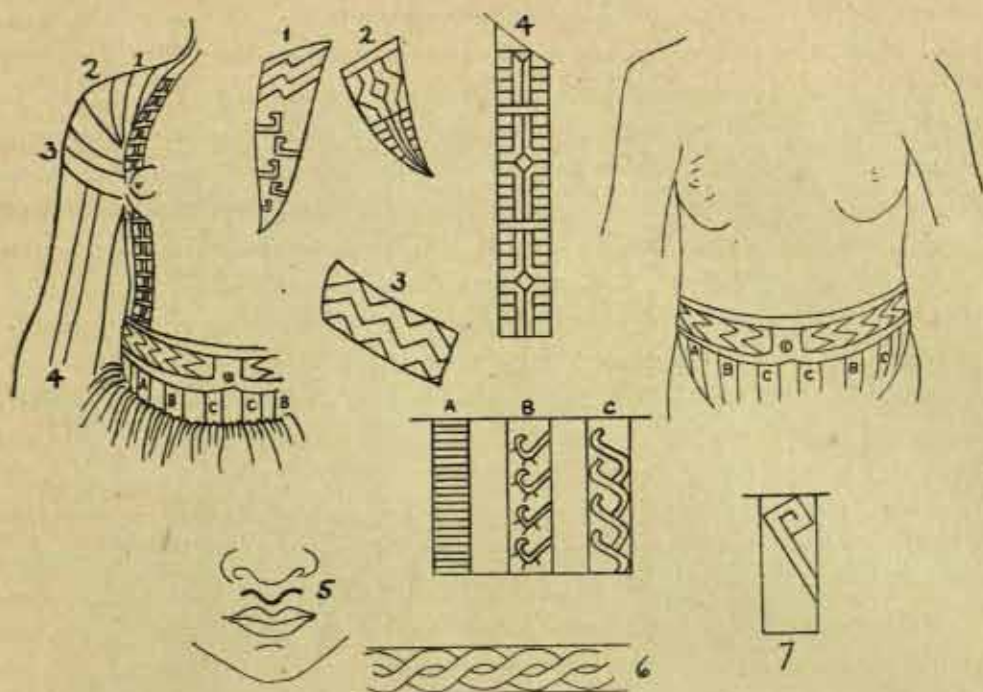
No. 43. *Lepa*.

D. Mailu shoulder pat-
terns worn by males
only (see p. 55).

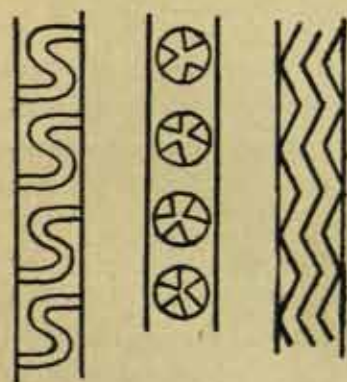
B

D

FIG. 8.



1. Dauli woman—(1) No. 48. *Boisipasipa*. (2 and 4) No. 49. *Manibobo*. (3) No. 53. *Motaisiaia*. (5) No. 40. *Boebua*. (6) No. 54. *Bisai*. (7) No. 55. *Memenawa*.



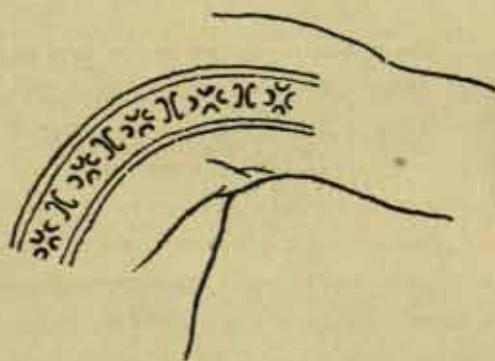
2. (A) (B) (C)

Dauli body patterns.

(A) Name not ascertained.

(B) No. 50. *Kadeuamunana*.

(C) No. 53. *Motaisiaia*.



3. Bonabona male pattern
(see p. 55).

From Cape Nelson northwards to the Mambare river the coastal tribes, known collectively as Binandele, are dark-skinned people and they do not tattoo. Many people, both men and women, among these tribes ornament their skin by scarring, the parts selected being usually the back, and the deltoid region of the arms. On the Mambare river the word for cicatrical markings is *taro*, while that for tattooing is *taroro*. It would seem, therefore, that tattooing, though not practised, is known to them. A photograph of the scarred back of a man from the Gira (or the Waria) river is shown in Plate XV, Fig. 3. On the Kumusi river women have the custom of gashing their cheeks deeply by a transverse cut as a sign of mourning. Obsidian obtained by barter from Goodenough Island was the substance used for gashing until glass and European knives took its place.

It was in this part of New Guinea that a stone pestle carved to represent a bird was found by a gold miner in 1905. It was discovered in "wash" forty feet above the present bed of the Aikora creek, and under ten feet of sand and clay. (See *Man*, January, 1908.) A very remarkable feature of this pestle are the wings. The artist who made it apparently endeavoured to give to the bird the appearance of having its wings outspread. But owing, perhaps, to the block of stone not having been large enough, or to the technical difficulty of carving a bird out of stone in that attitude, he has met the difficulty half-way by figuring it with wings unfolded, but not outspread. As the idea of birds and flight appears to be connected so largely with tattooing in South-eastern New Guinea, it is well to bear this carved bird in mind. That the people who made and used this pestle lived a great while ago is evidenced by the depth of river "wash" that covered it when found.

The Eastern Islands.

The tribes inhabiting the several islands and archipelagos stretching eastward from the mainland are none of them by custom tattooing people, with the possible exception of Rossel Island. Occasionally one meets a man with a device tattooed on the chest, and I have seen girls here and there in the Trobriands with crudely executed tattooing markings on the upper part of the belly.

During the single hurried visit I paid to Rossel Island, I do not recollect having noticed that the people there were tattooed, but subsequently I met at Sudest Island a Rossel Island youth whose face had been tattooed in such a manner as to give me the impression that it had been done by somebody whose tribe regularly practised the art. He informed me that he had been tattooed in Rossel Island, and gave the following names to the patterns (Plate XIV, Fig. 3).

The horseshoe-shaped marks within the marginal lines, extending from the corners of the mouth across the cheeks, he called *dō*; the circular marks under the eyes *puwa*, and the curvital mark in the centre of his forehead *nengō* or *n'gō* or *n'gwō*. This last design appears to be a flying bird convention. In a vocabulary



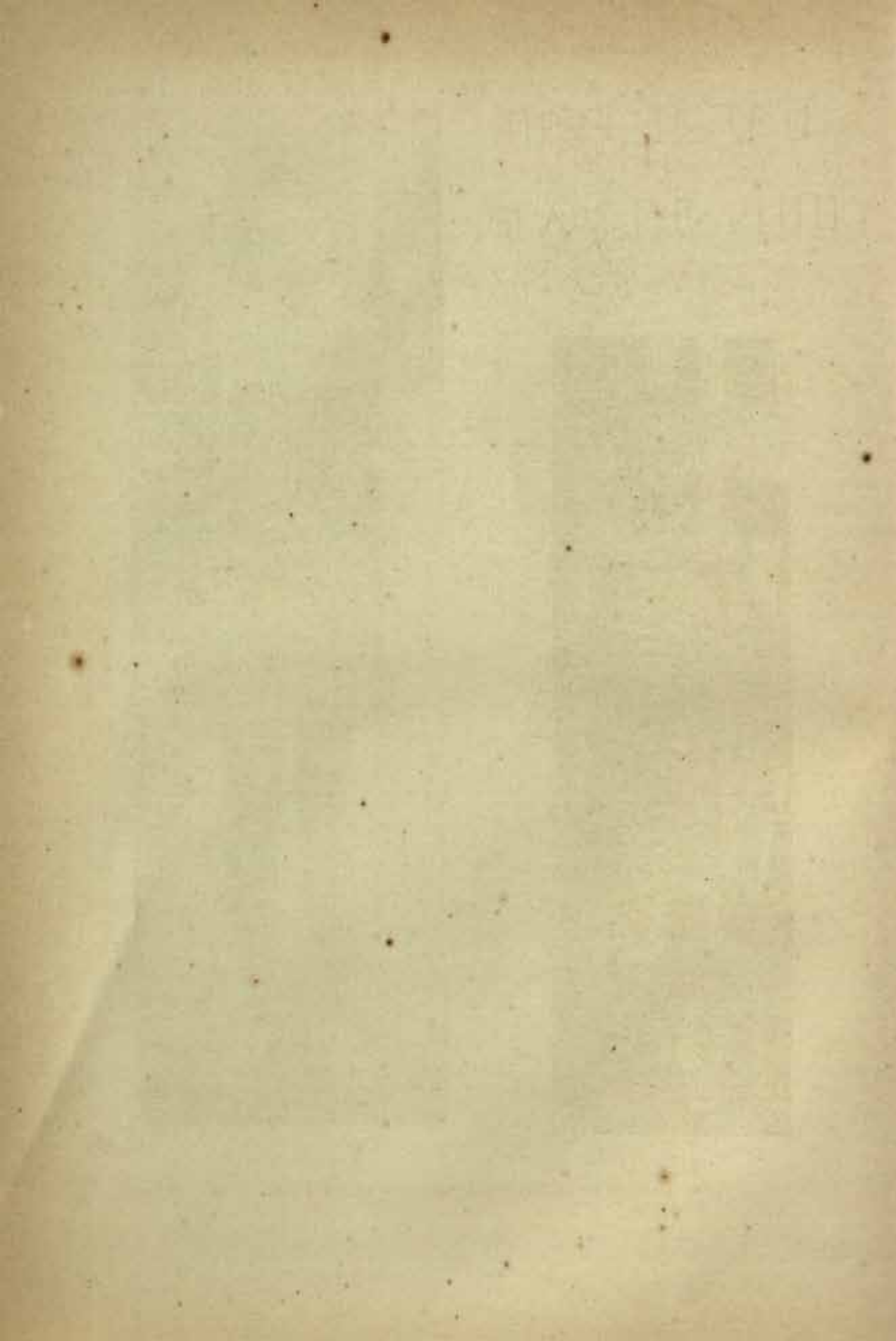
(a)

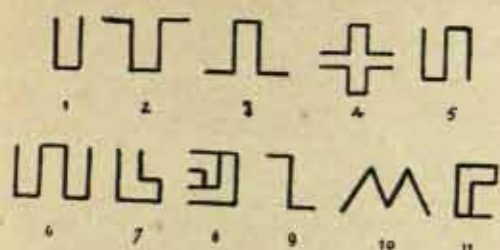
(b)

1.—WAIMA WOMAN, SHOWING PATTERNS NOS. 1 TO 6.

The marking on the deltoid region of the arm in (a) and on the belly in (b) is incomplete.

TATTOOING IN SOUTH-EASTERN NEW GUINEA.





1.—SOME *areau* VARIANTS (PATTERN NO. 1).

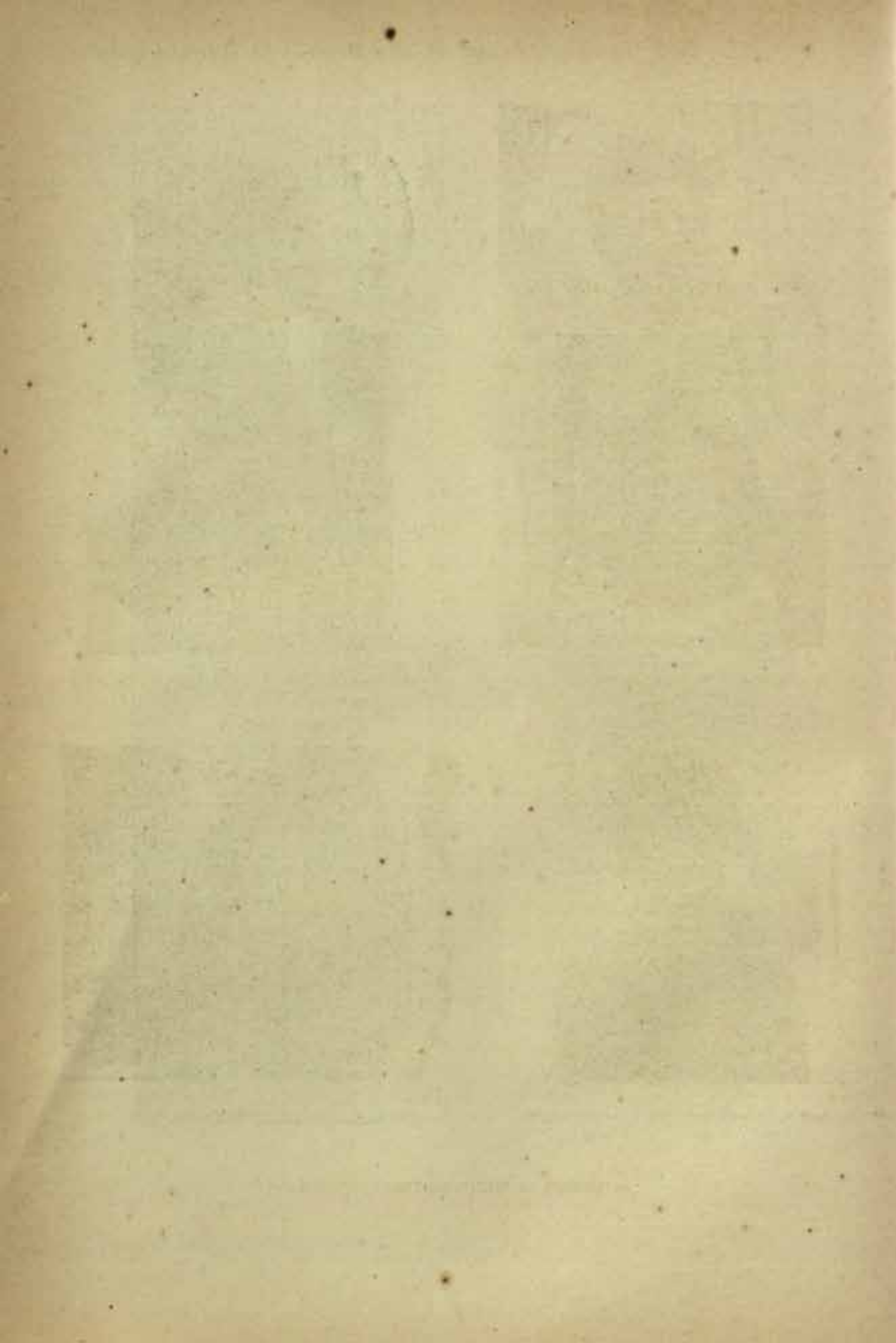


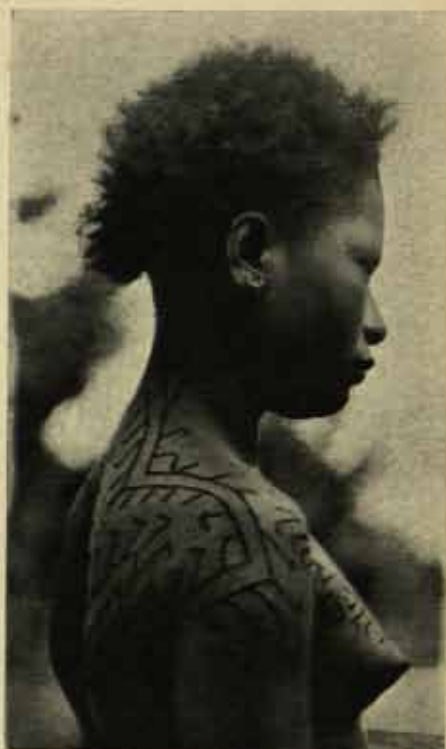
2.—WAIMA GIRL.



3.—MEKEO WOMAN.

TATTOOING IN SOUTH-EASTERN NEW GUINEA.





1.—MEKEO WOMAN, SHOWING PATTERNS NOS. 7 TO 12.

2.—MEKEO WOMAN, SHOWING PATTERN NO. 10, *mangeau*.

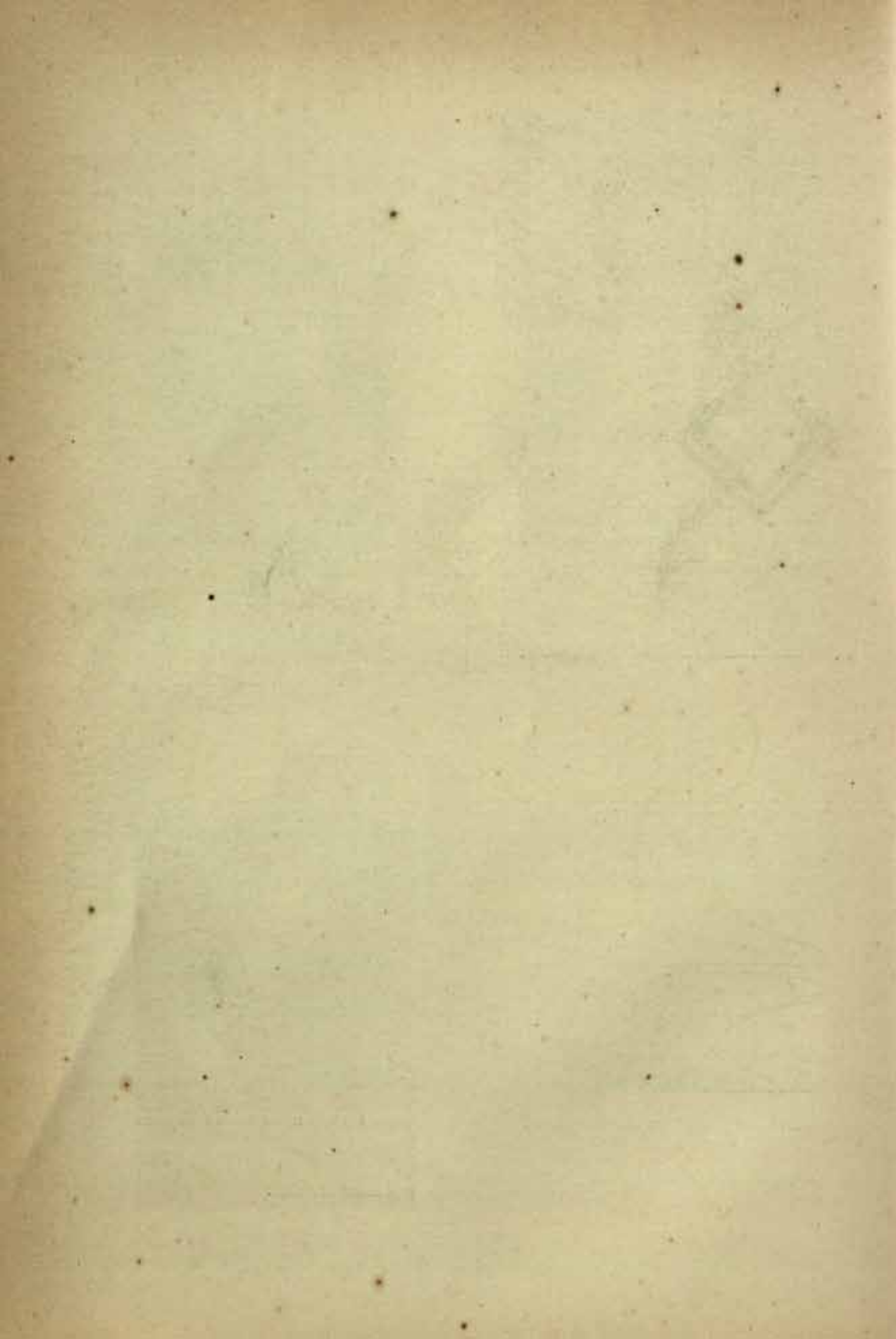


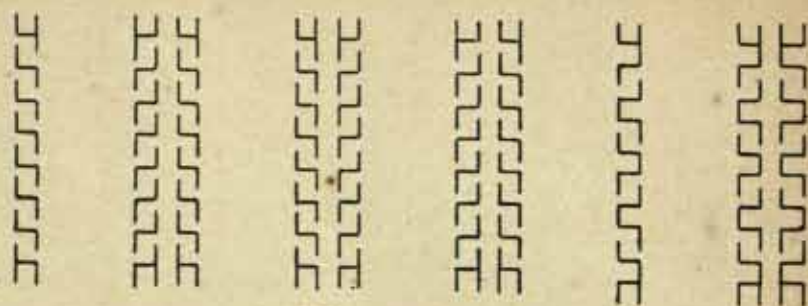
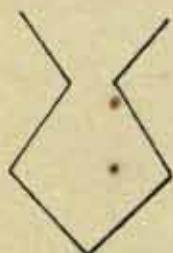
3.—MEKEO WOMAN, SHOWING PATTERN NO. 10, *mangeau*.



4.—HULA YOUTH, SHOWING *bina* MARK.

TATTOOING IN SOUTH-EASTERN NEW GUINEA.

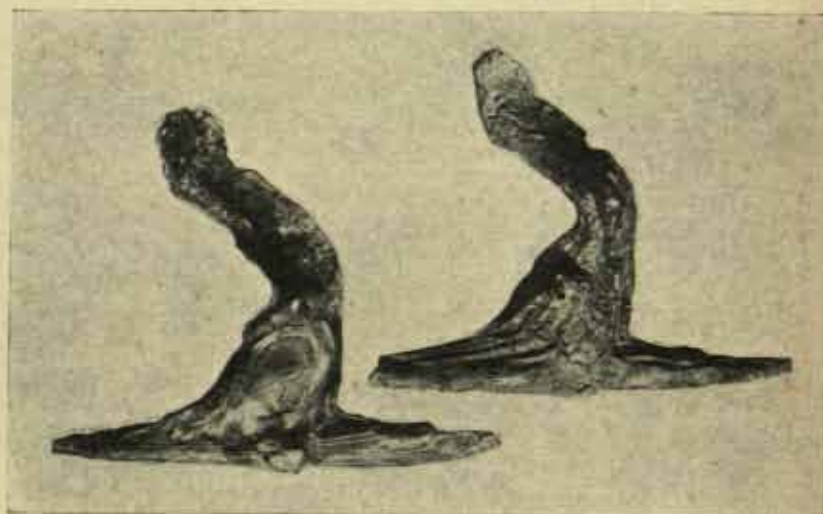




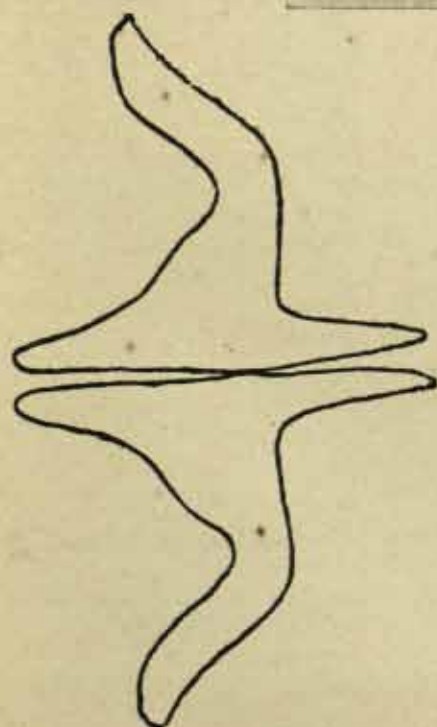
2.—*Kakiu* VARIANTS, NO. 17.



5.—*Boaroko* ON *dubu* AND ON CHEST.



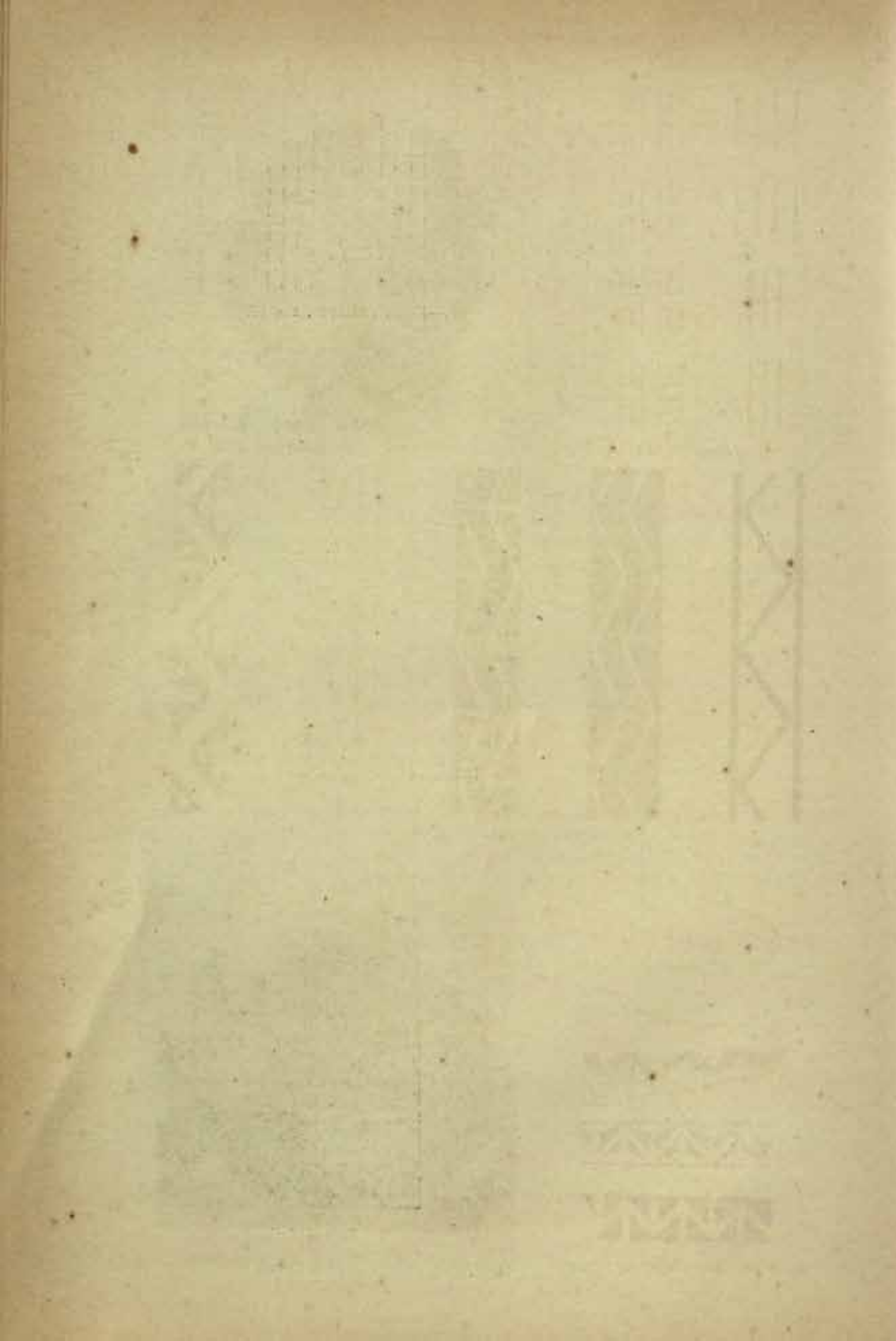
3.—MARINE BIVALVE CALLED *daute* (see p. 39),
SHOWING BOTH HALVES OF SHELL.
In figure 4 the shell is shown opened.

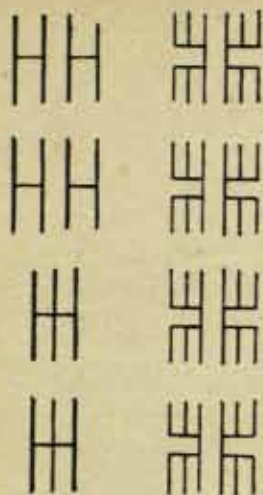


4



1.—*Lakatoi dagina* (see p. 35).

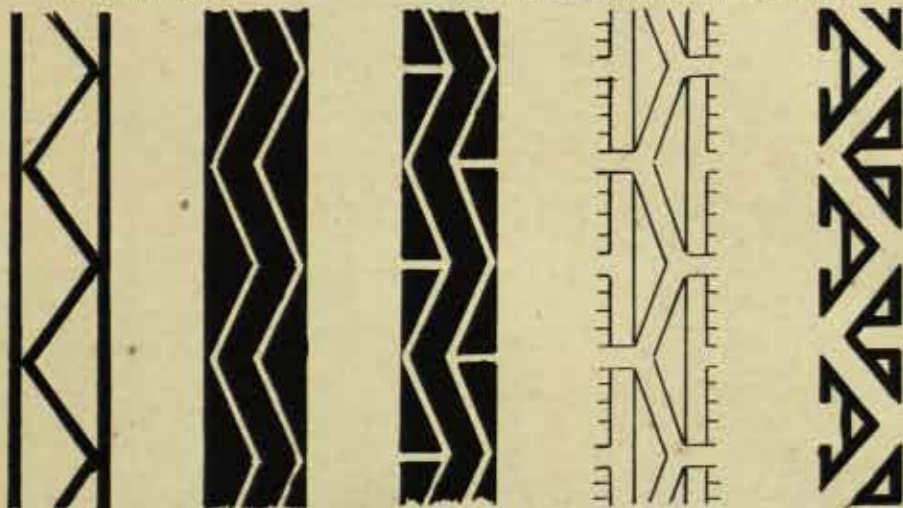




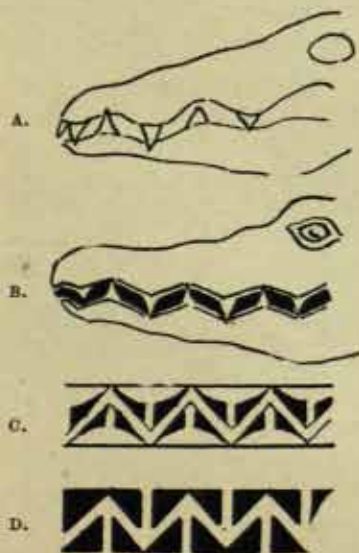
1.—*Ikoru* (no. 18).



2.—MOTU GIRL, SHOWING *ikoru* MARKS.



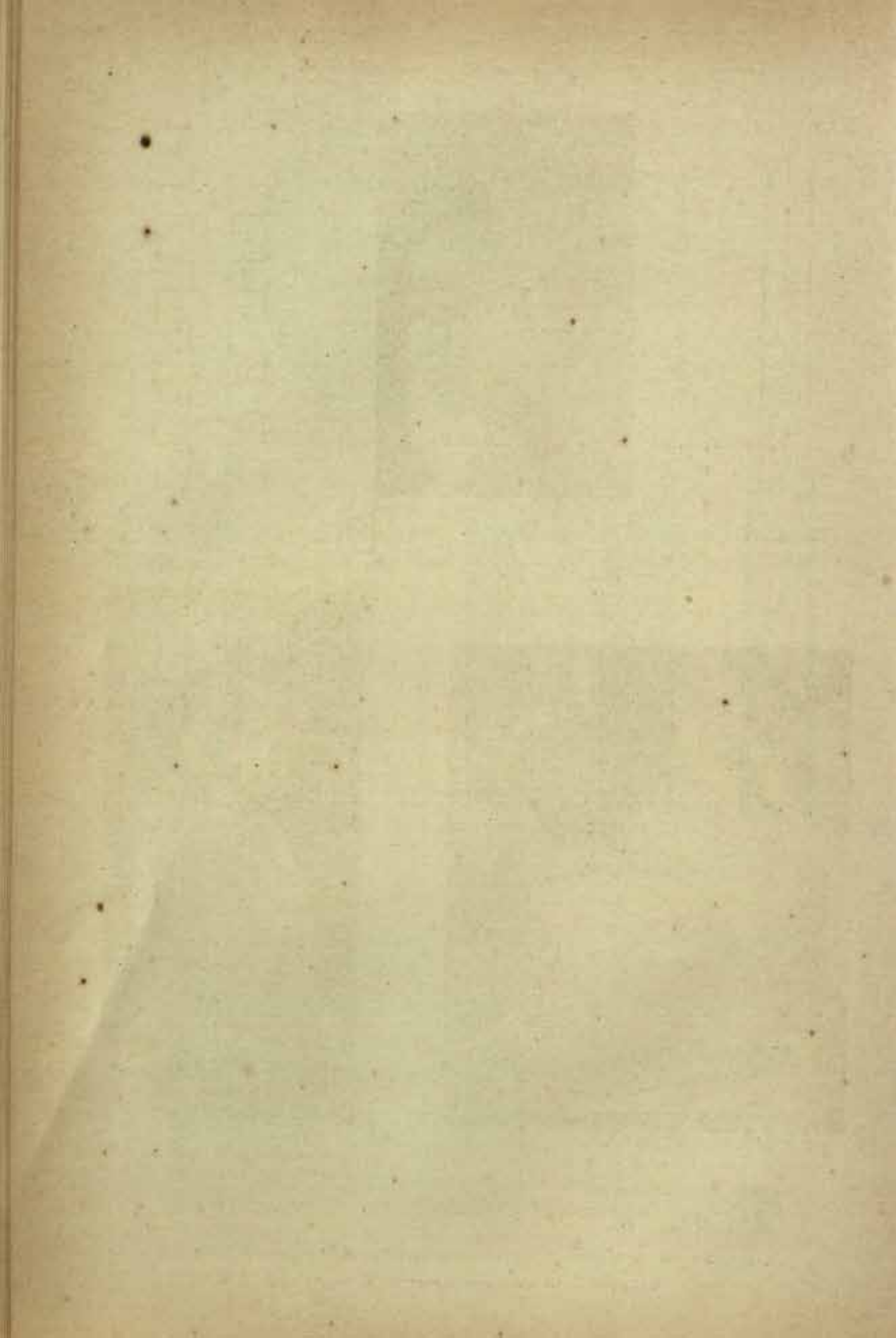
3.—VARIANTS OF *neneva* (no. 19).

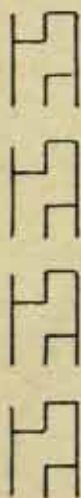


4.—A POSSIBLE ORIGIN OF *neneva*.



5.—MOTU GIRL, SHOWING *neneva* ON NOSE.

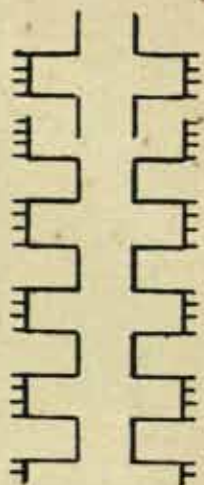




1.—*Ganagana* (NO. 20).



2.—HULA GIRL, SHOWING *aiva roa* (NO. 22)
ON CHEEK.



3.—*Bareko* (NO. 24).

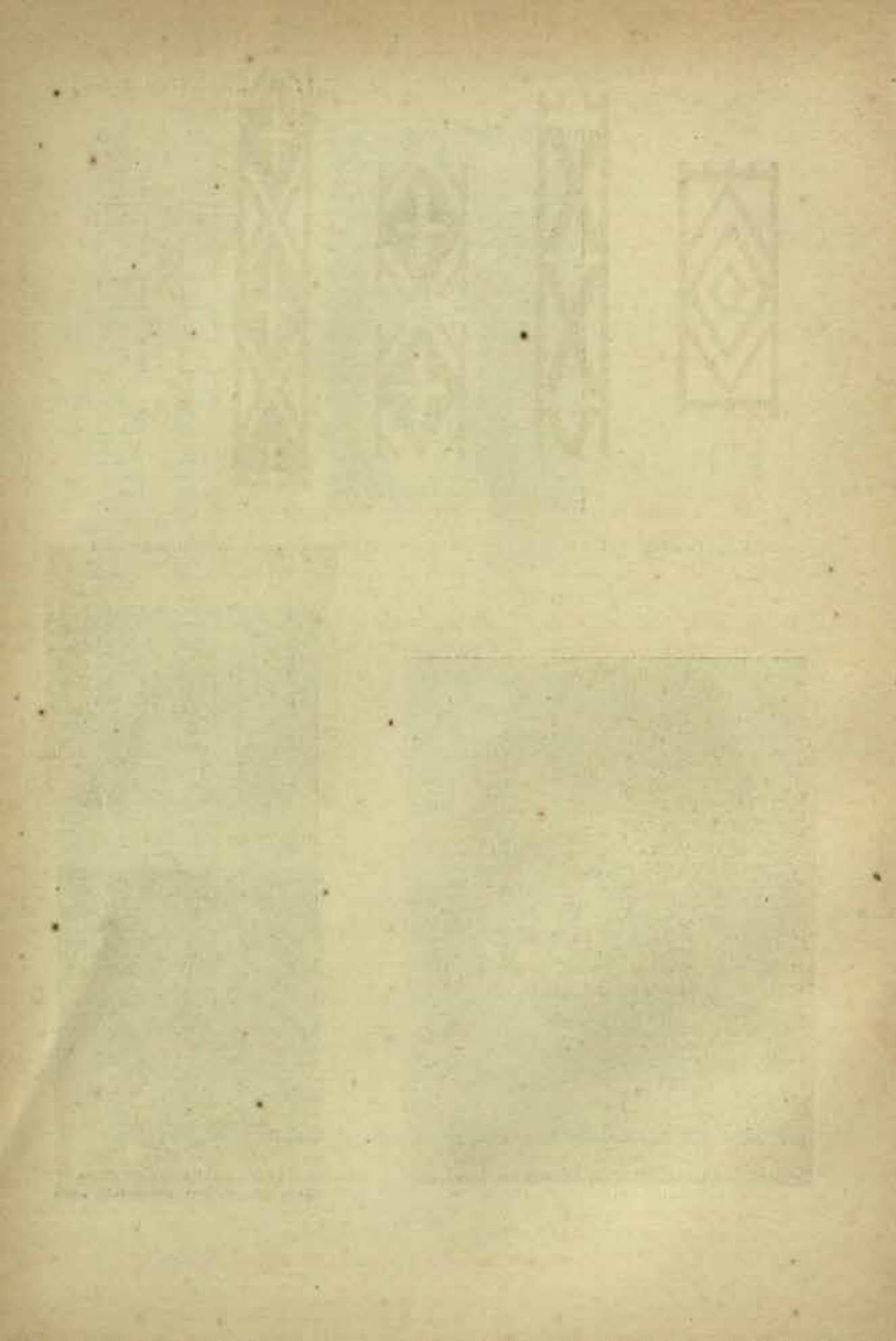


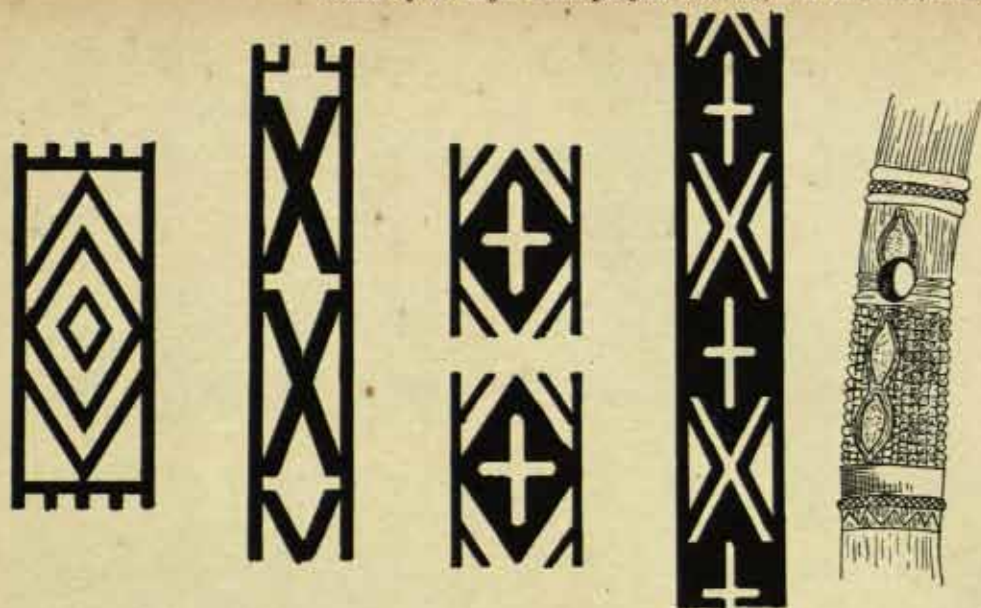
4.—MOTU GIRLS, SHOWING *ialata tarana* (NO. 25)
AND *dihu dihu* (NO. 26) ON BACKS.



5.—HULA GIRL, SHOWING *ialata* ON DELTOID
REGION OF ARM, AND *dihu dihu* ON HAND.

TATTOOING IN SOUTH-EASTERN NEW GUINEA.





1.—VARIANTS OF *dihu dihu* (NO. 26) AND *dubu* POST, SHOWING *dihu dihu*.



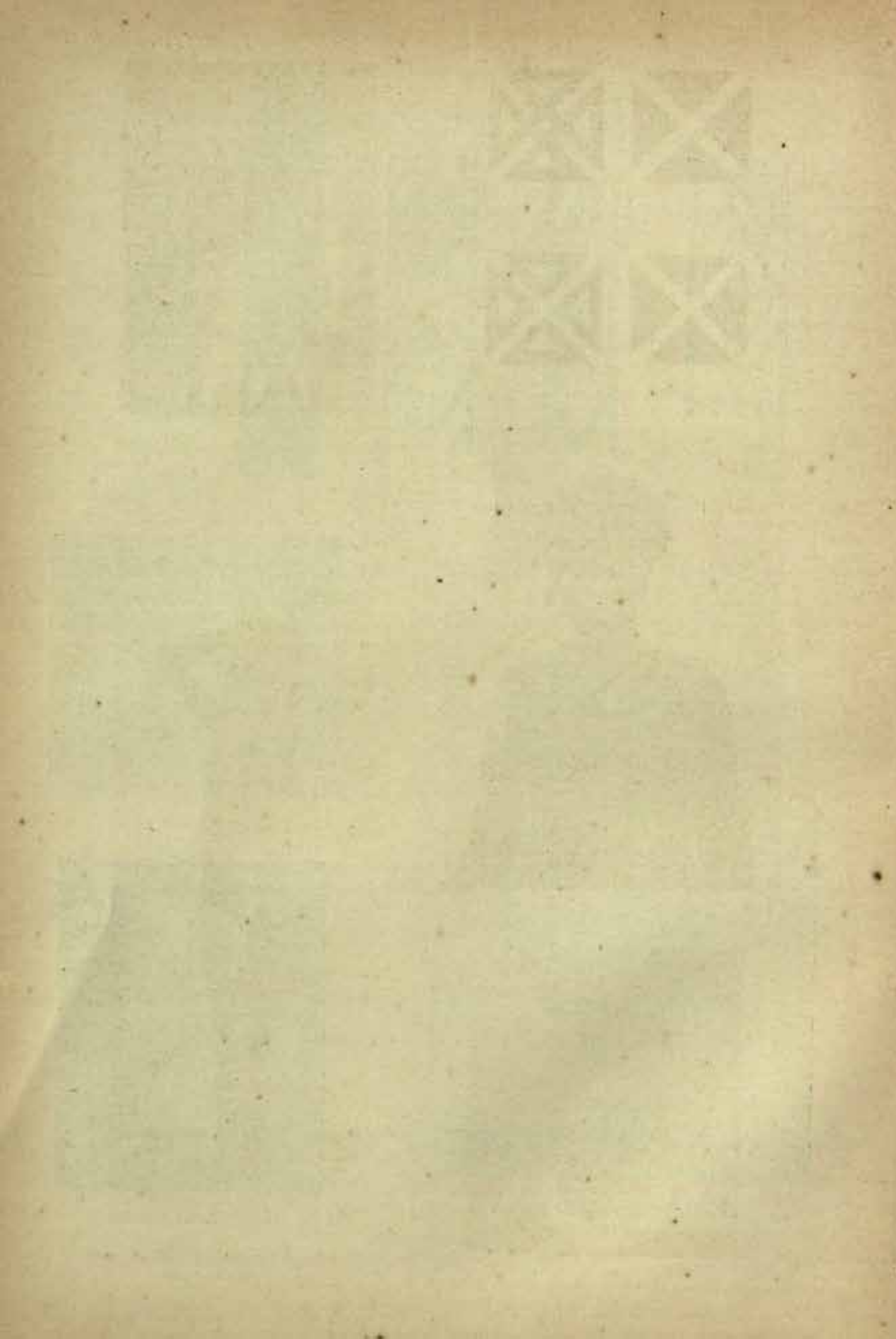
2.—HULA GIRL, SHOWING *kakiu* (NO. 17) ON FACE, AND *gado roho* (NO. 29) ON CHEST.

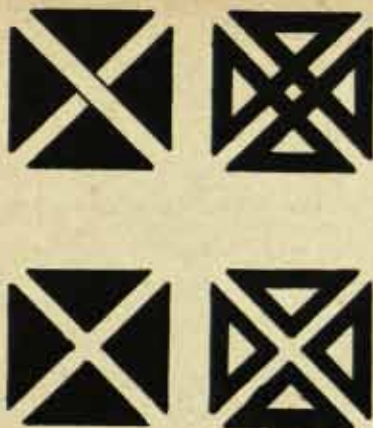


3.—*Dihu dihu* IN CENTRE LINE OF BELLY.



4.—*Kadidiha* (NO. 30).





1.—Kaiakaro VARIANTS (NO. 27).



2.—HULA GIRL, SHOWING *kili* MARKS (NO. 27).



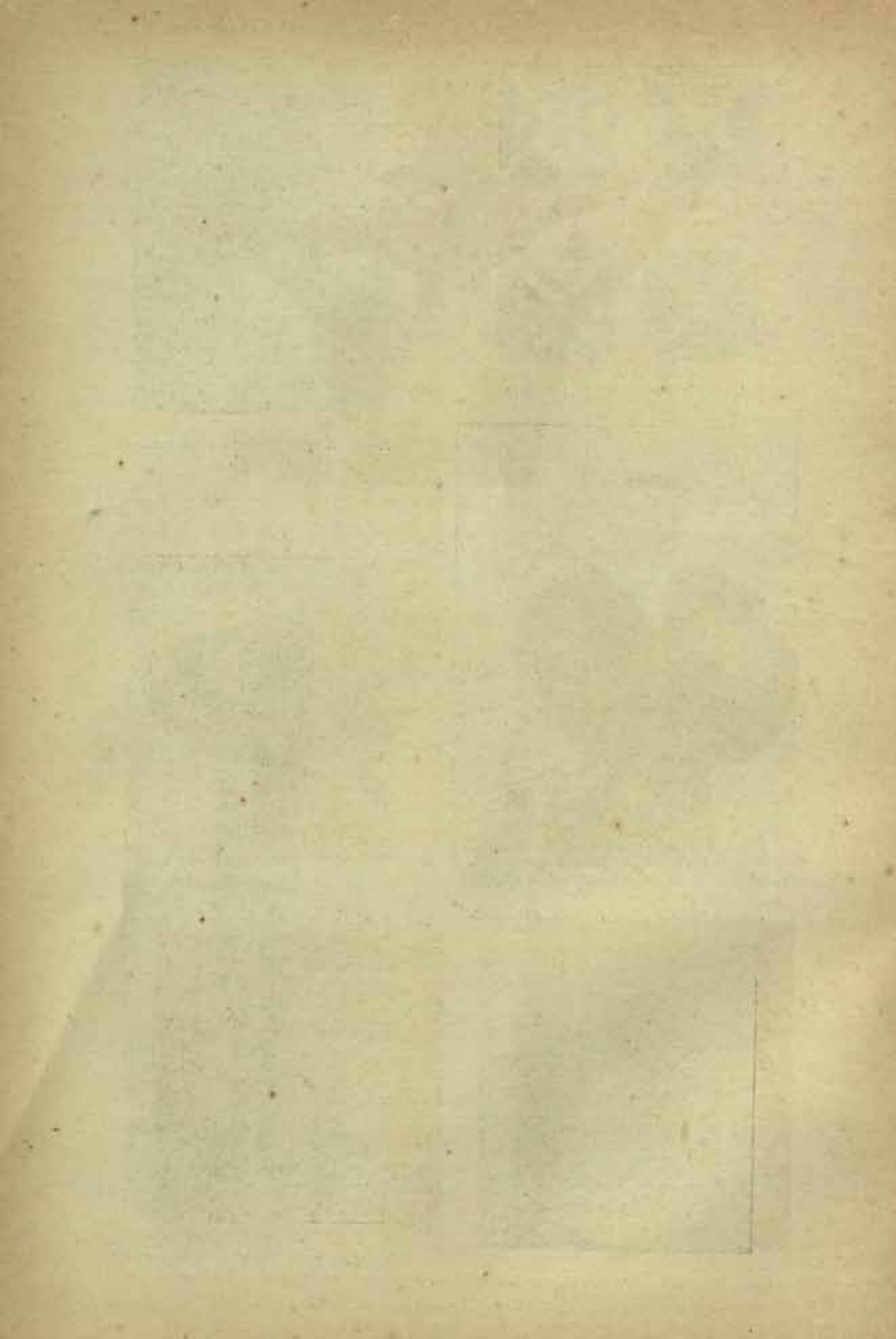
3. MOTU WOMAN, SHOWING *gado* (NO. 28).



4.—MOTU GIRL, WEARING PEARL SHELL CRESCENT.



5.—MOTU GIRL, SHOWING *kaiakaro* AND OTHER MARKS ON LEGS.





1.—HULA GIRL, SHOWING *kariga* MARKING (NO. 30).



2.—MOTU GIRL, SHOWING *kadidika* MARKING ON RIGHT AND LEFT ARMPIT.

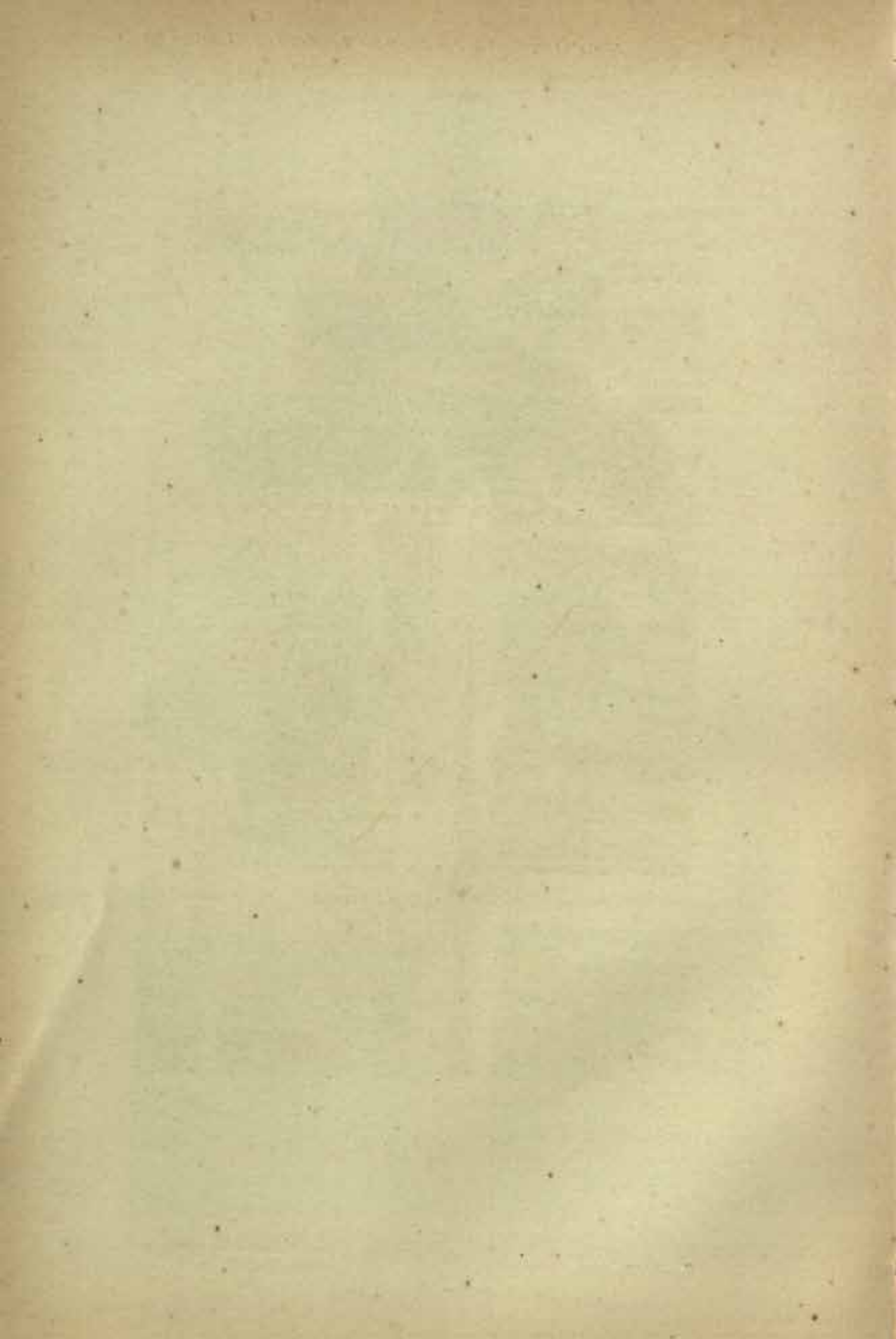


3.—AROMA GIRL.



4.—AROMA GIRL.

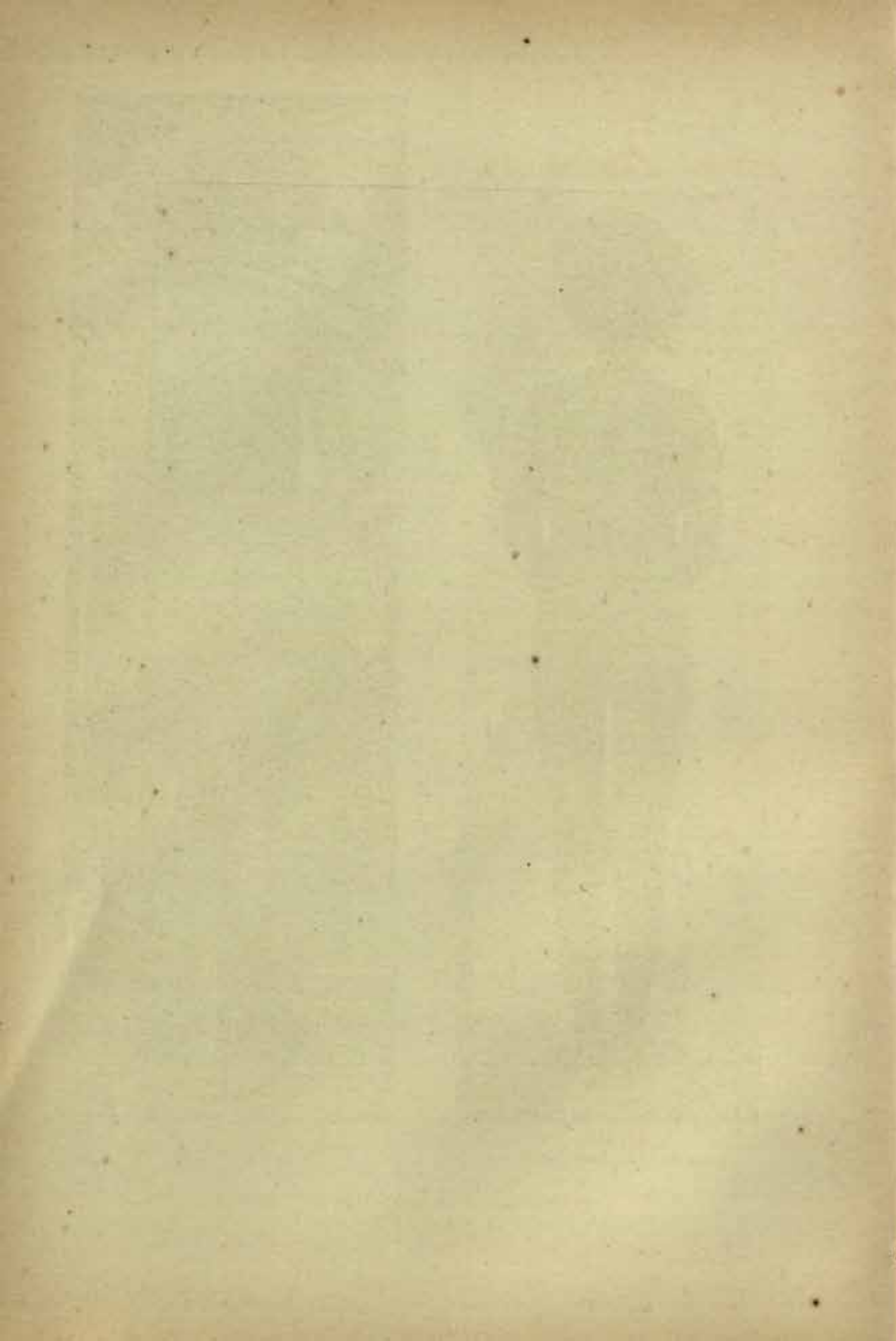
TATTOOING IN SOUTH-EASTERN NEW GUINEA.





1.—PAINTING PATTERN WITH *puriki* ON MOTU (GAILE) GIRL. (See p. 26.)

TATTOOING IN SOUTH-EASTERN NEW GUINEA.



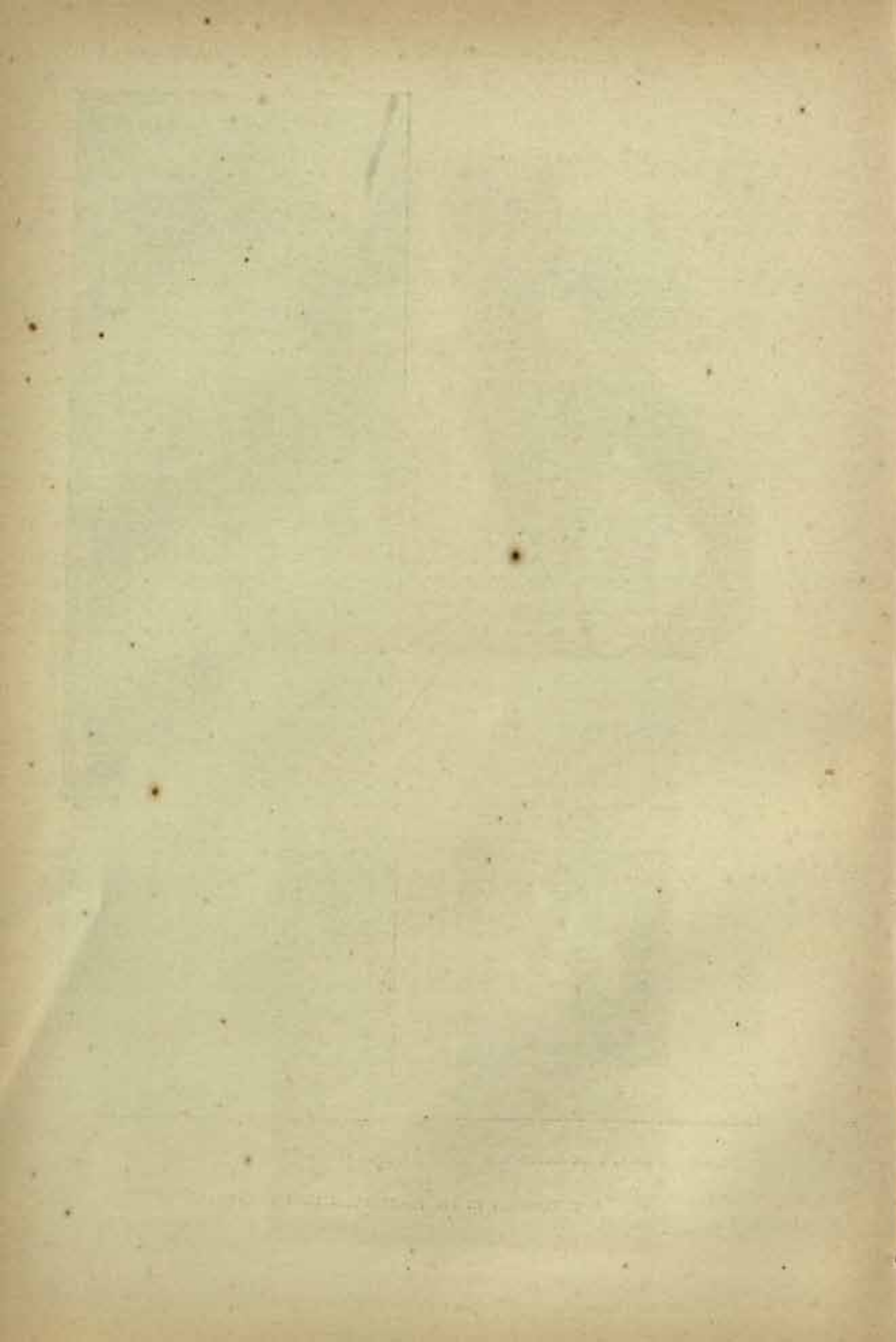


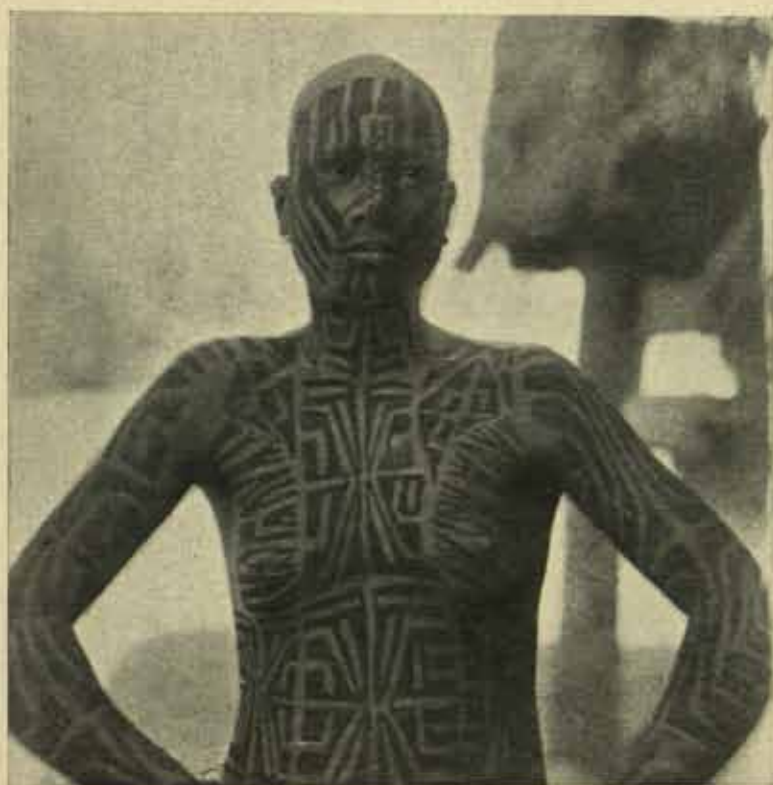
1.—MOTU GIRL, BACK TATTOOING.



2.—GAILE GIRL, BACK TATTOOING.

TATTOOING IN SOUTH-EASTERN NEW GUINEA.

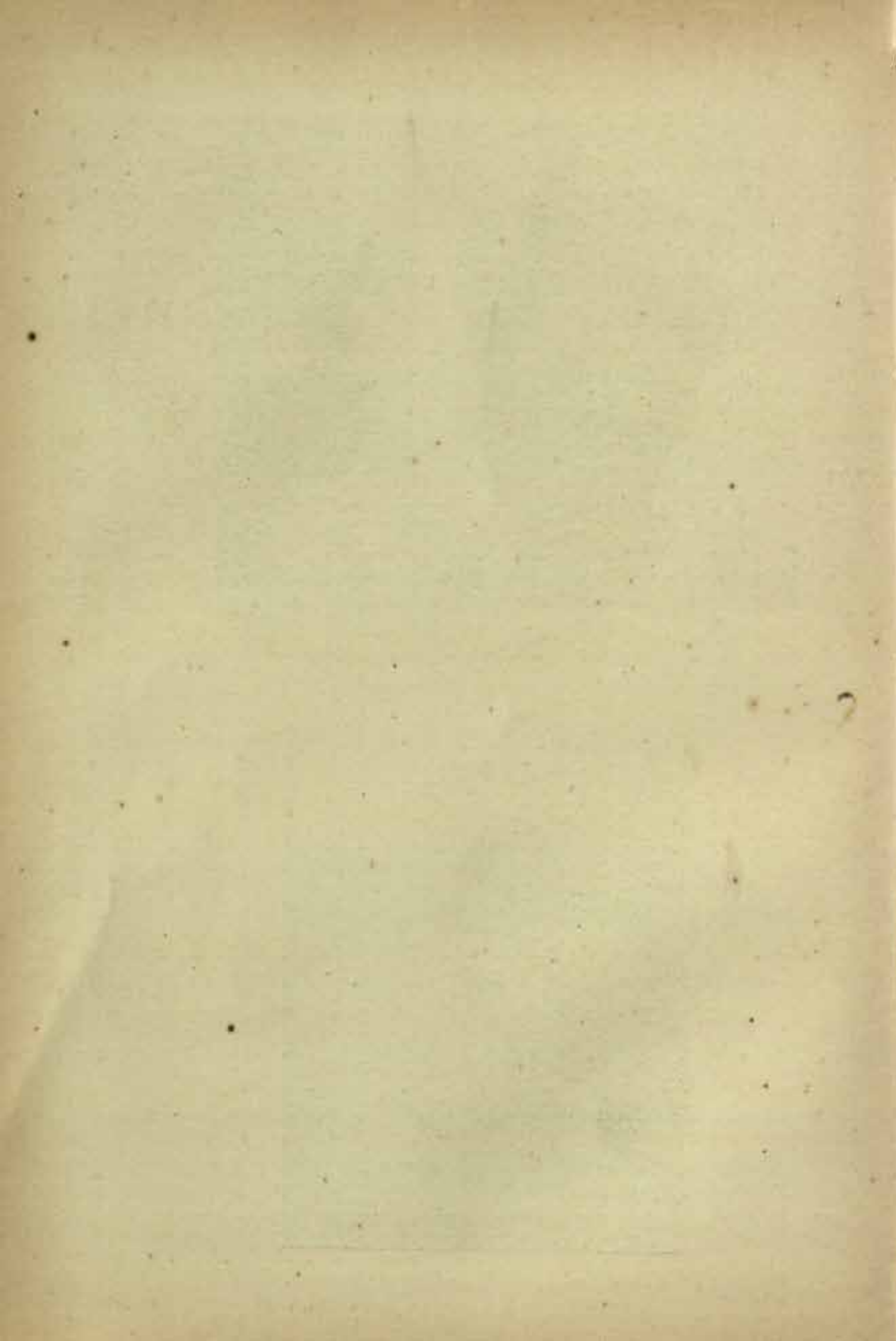




1.—FULLY TATTOOED AROMA WOMAN.

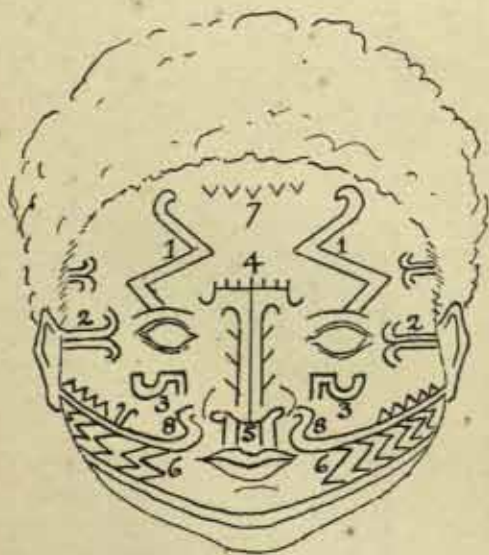


2.—SHOULDER TATTOOING OPERATION AT BONABONA.
TATTOOING IN SOUTH-EASTERN NEW GUINEA.





1.—MAILU GIRL. THE VERTICAL PATTERN FROM THE TIP OF THE NOSE UPWARDS IS THE MOTU *kakiu* (AROMA: *ragela*) PATTERN.

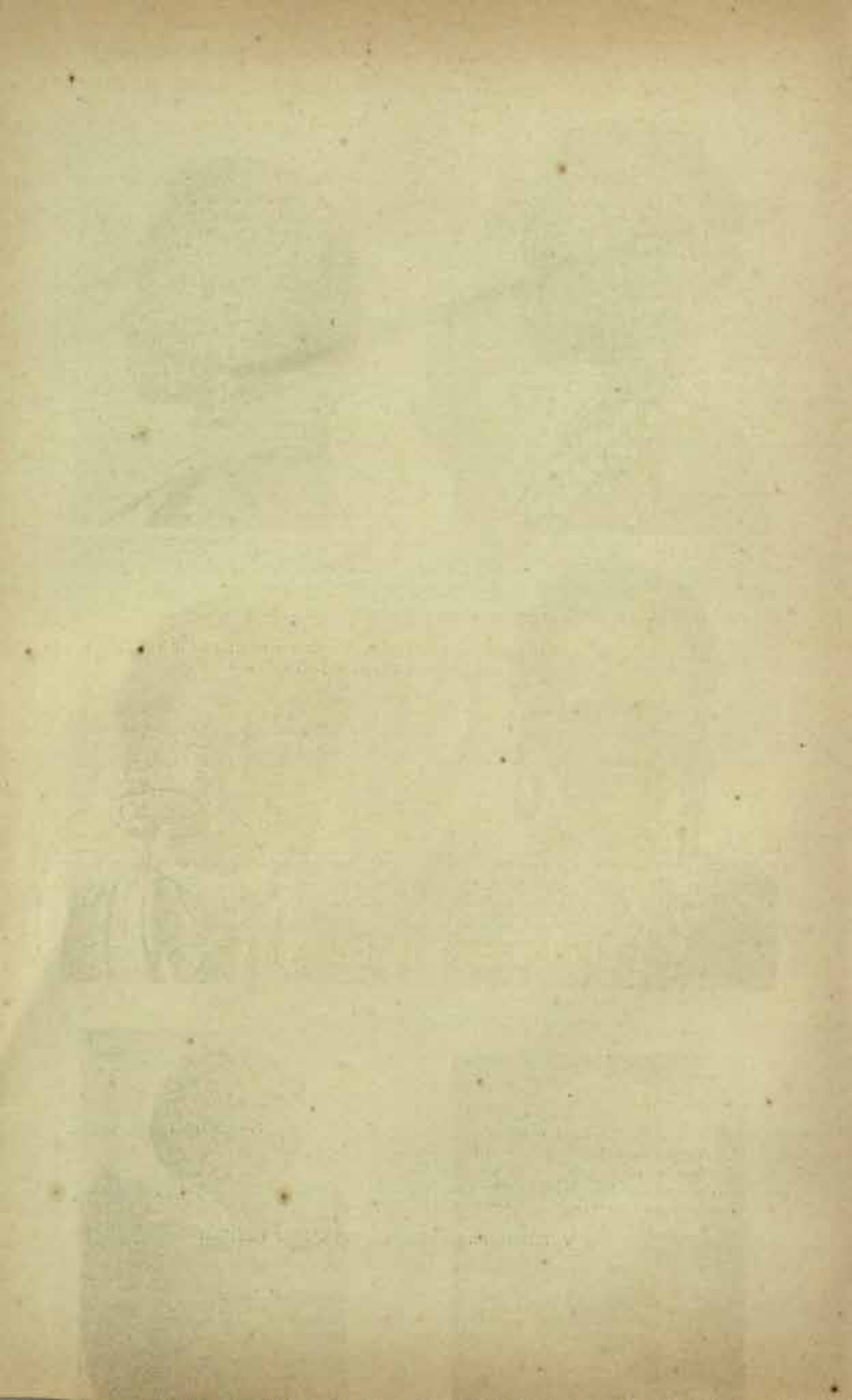


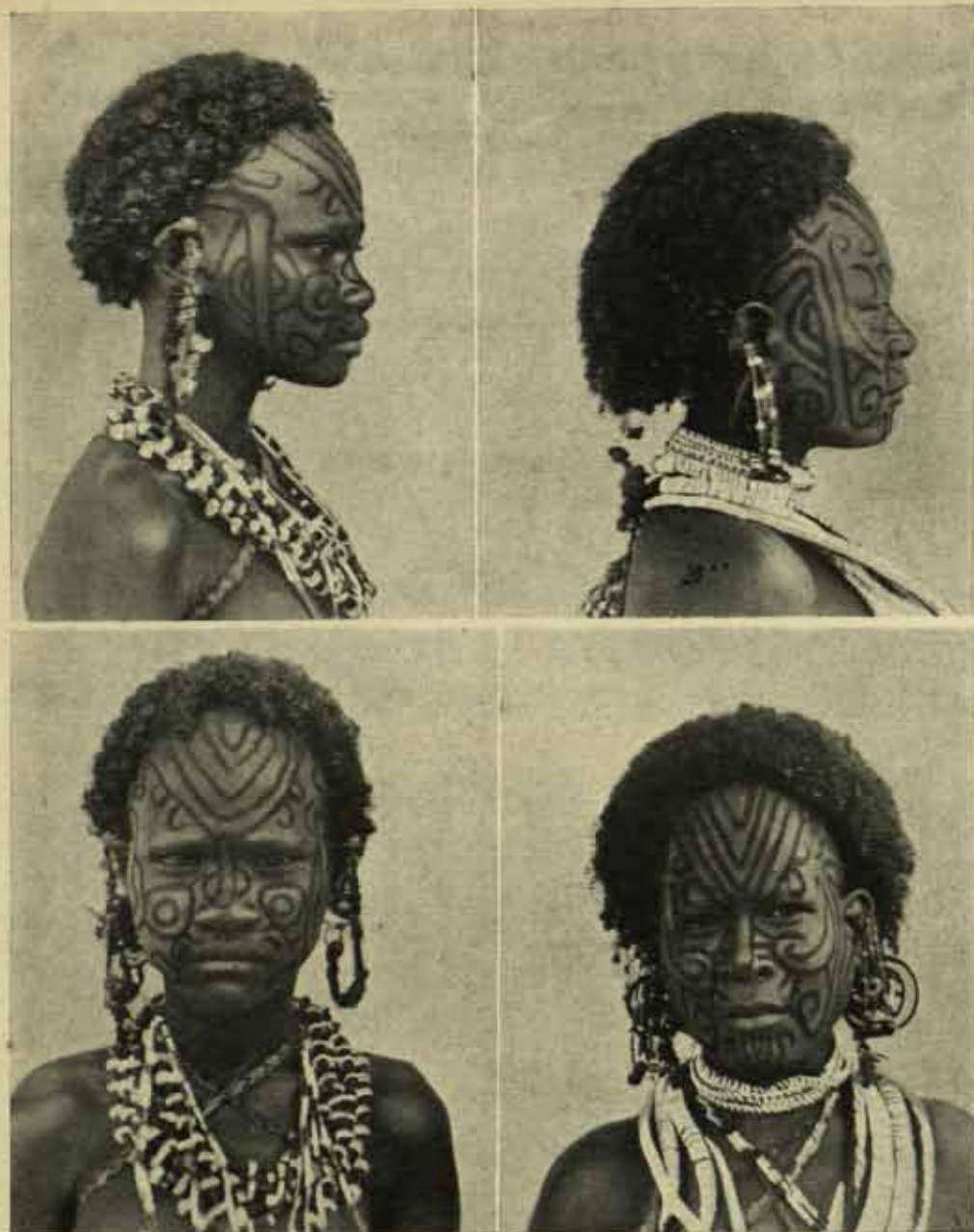
2.—DAUI WOMAN.

- | | |
|--------------------------------|-----------------------------------|
| 1. <i>Aisava</i> (No. 36). | 2. <i>Silo</i> (No. 37). |
| 3. <i>Mata kodo</i> (No. 38). | 4. <i>Enari</i> (No. 39). |
| 5. <i>Subanomnom</i> (No. 40). | 6. <i>Dalo daloioia</i> (No. 41). |
| 7. <i>Motamota</i> (No. 47). | 8. <i>Boi</i> (No. 41). |



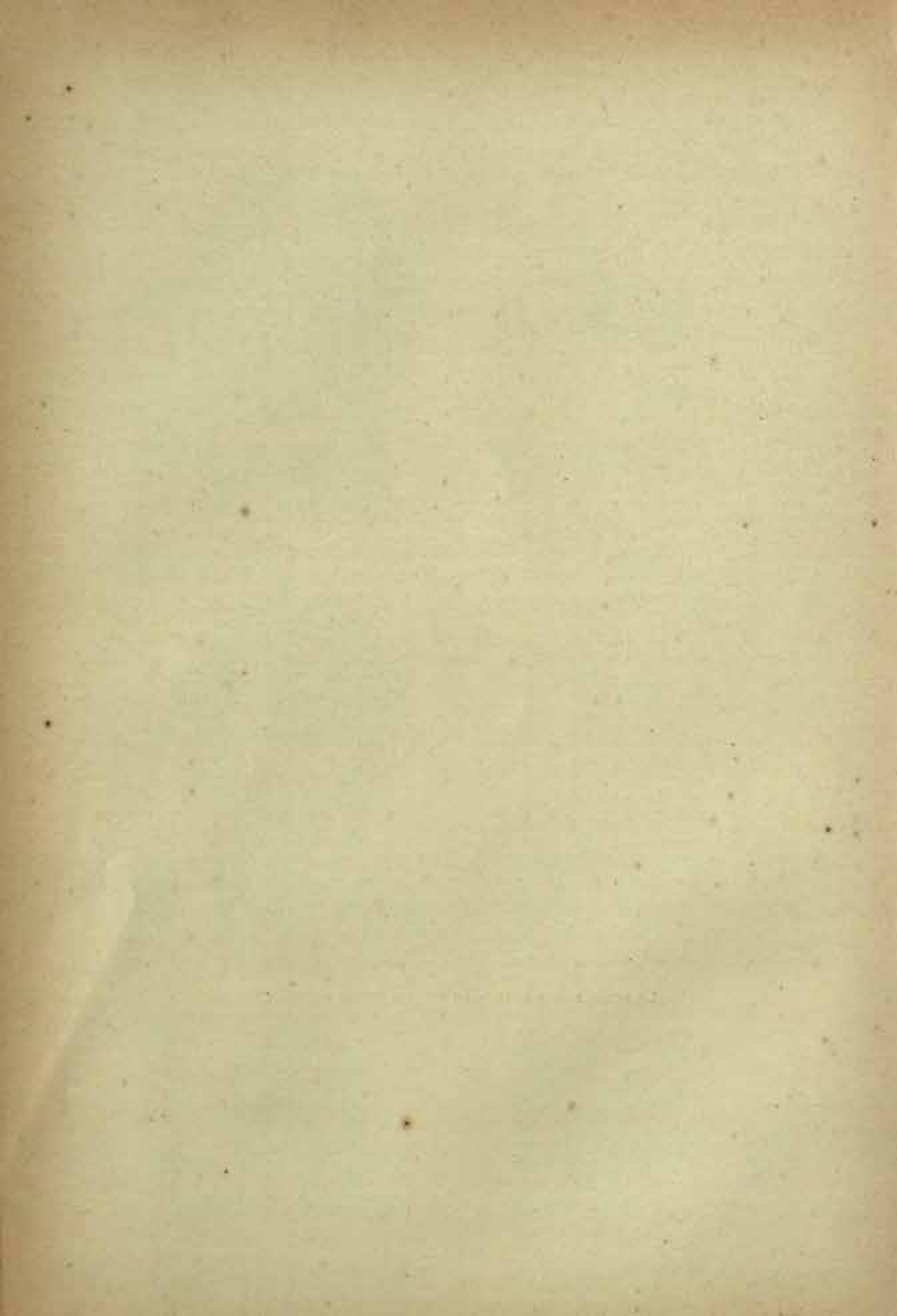
3.—ROSSEL ISLAND YOUTH.





1.—PROFILE AND FULL FACE OF TWO MALISIN GIRLS.





of the Rossel Island dialect published in British New Guinea Annual Report for 1892-93, the word *ngu* is given as meaning frigate-bird. It is not improbable that *n'gō* and *ngu* represent the same word.¹

IV.

FIRST VOCABULARY.

Comparisons should be made between the words in the first and third columns of the following vocabulary, for it often happens that words which mean tattooing in one dialect mean carving in another. The words contained in the second column are less important, and it is not certain that all of them are correct, for though all the New Guinea tribes with whom I have come into contact have definite words to denote tattooing—whether they practise the art or not—those who do not practise it naturally find difficulty in supplying the interrogator with a verb which they never use. But I have considered it advisable to include them in the vocabulary, partly for the sake of the verbs in the dialects of those tribes who do tattoo, partly because in some instances non-tattooing tribes have given me verbs which may be useful for purposes of comparison. Some of the words given under “carving” are nouns and some are verbs.

The etymology of nouns for tattooing used in a general sense is, like the rest of tattooing nomenclature, very obscure. The following suggestions must be regarded, therefore, as little more than shadowy indications.

Poapoa.

The South Eastern New Guinea tribes in whose dialects words like *poa* or *bua* denote tattooing are widely scattered. Assuming that *oka* = *poa*, the word occurs as far west as the Purari delta, where the Kaimare and the Maipua people both have *oka*. Further eastward in the Gulf we find *hohoa* at Kerema and *foa* at Toaripi. In the Collingwood Bay district on the north-east coast similar words reappear in the dialects of the following tribes, *boare* (Kworafi, Okein, Upper and Lower Musa), and *bua* (Maisin). In Rossel Island, the most easterly island of New Guinea, *puwa* means tattooing. All the foregoing tribes speak non-Melanesian dialects.²

Only two of the Western Papuo-Melanesian tribes use the *poa* word for tattooing, namely, the Mekeo and the Waima tribes, who have, respectively, *poapoa* and *boaboa*.

As far as I know there is not any word bearing any resemblance to *poa* for tattooing in any part of Indonesia, Melanesia, or Polynesia. The fact that where

¹ It is very difficult to write with accuracy words of the Rossel Island dialect. The vowels are often modified, and if a native is asked to repeat a word he as often as not varies the pronunciation.

² Melanesian words, however, frequently occur in many of such dialects.

FIRST VOCABULARY.

	1 tattoo (s.)	2 tattoo (v.)	3 carving	4 bird	5 wing	6 feather	7 blood	8 shoulder	9 star
Kiwal (Fly river)	titi ...	titi titi	titi ... kikiria	wowogo	tamu ...	wowogo pusa	arima	tigiri ...	gugi
Maipua (Puari delta)	ota ...	—	okoro	naku	—	uru, ke ere	aro ...	ano ...	nopu, dopo
Kaimare (Puari delta)	ota ...	—	—	—	—	—	aro ...	ano ...	—
Kereua (Gulf)	boba ...	—	—	ori ...	mabo	halereva ...	ioru	horo ...	koû
Toaripi (Gulf)	foa ...	—	karoro	ori ...	mako, mabo	bele, mehe	ovo	soroho	koru
Mekeo (W. P. Mel.)	paupoa	pa paupoa	malele	inei	pangi	—	ifa ...	vango	pi'u, mûmû
Waina (W. P. Mel.)	boba	boaboa	marete	rovorovo	—	—	aruaru	aro	moa
Nara (W. P. Mel.)	ilele	lele akua	ilele	manu	vani	vuvui	lala	vo'u	visiu
Kabadi (W. P. Mel.)	morete	—	? rero	manu	—	bubura	rara	aropaku	ue
Motu (W. P. Mel.)	revareva	revareva	igiri, ? ikoro.	manu	hani	hni	rara	paga	hisin
Hula (W. P. Mel.)	aloalo	aloalo aua	koroa (v.) kalila	manu	kare	geve, pulu	rara	alo	gibu
Sinugolo (W. P. Mel.)	belabela	? nobera	—	manu	pane	pulu	lala	n'gaba	visigu
Aroma (W. P. Mel.)	aloalo, beva	? aviavi	aloalo	manu	bane	gui	lala	calo	bue
Mallu (W. P. Mel.)	tartaro	? davadava	—	manu	papa, lealea?	uru	lala	gabi	idin
Bonabona (S. Massim)	kurikuri	kurikuri	ureva	—	mabo, pepe	daguri	osina	eahara	—
Dani (S. Massim)	ai uri	ietore	pusa	—	—	—	osina	daba'alo	—
Sariba (S. Massim)	—	eatu	? sai	—	peapea	daguri	kuasina	dabaiaro	kipuara
Teste Is. (S. Massim)	lauauai	silauai	pasa(of pots)	roro	—	—	kuasina	le'ale'a	—
Maiwara (S. Massim)	hamari	aa hamari	laukidi	—	—	—	tala	avala	—
Wedan (S. Massim)	girma or ruru	rurui	tai ...	kiu	pape	tawara, arara	tara	avarn	ubona
Dobu Is. (S. Massim)	basileli	—	daiaigi	manua	pape	dagura	rara	arana	kuadina
Goodenough Is. (S. Massim)	ulinli	gobaiyoyo	—	—	—	—	bubuda	avalada	—
Panateti Is. (S. Massim)	leileli	roror	roror	basumu	pepe	—	saria, mariba	everan	putum

	1	2	3	4	5	6	7	8	9
Kiriwina (N. Massim)	katukwatu	katukwatu	kutais, ? karoro	manaa	...	dagura, ? digulela	buiai	ilava	utuam
Murua (N. Massim)	katukwata	—	ireres	man	pipene	unuwani	buiai	ereva	utuni
Nada (N. Massim)	katukwatu	—	rere	manu	papane	unum	buiai	—	utuma
Rosiel Is.	puwa	...	de-tiada, taa	ma	lema	giyanda, chanda	wō, wūe	tinya, ngeuan- gge	gwoda, buda, pura
Maisin (Collingwood B.)	bua	bua ku ta	kayan, ovi...	—	—	—	ta	siva	—
Olan (Collingwood B.)	kirukirum	ku kirum	kirukirum	—	—	—	rara	tuabun	daidia
Onjo (Collingwood B.)	dijn	dija	diju...	—	—	—	dita	munturun	—
Ubir (Collingwood B.)	gayam	egayam	gayam	rika	—	buroro	tava	abaran	—
Kwora (C. Nelson)	boare ²	boare dewu	kamba	—	—	—	ororo	gaton	—
Okein (C. Nelson)	boare ²	—	—	—	—	—	hisara	gapo	—
Winapi (C. Nelson)	atuastun	kutumu	anafito	—	—	—	rarāa	tuabun	—
Arifamu (C. Nelson)	atutun	tatun duabi	anafito	—	—	—	rarā	tuabun	—
Upper Musa River	boare ²	—	warfofe	—	wachi	—	iva	eri	—
Lower Musa River	boare ²	—	bumbuki	—	—	—	onoma	yisa	—
Binandele	taroro	taroro	kewari, ovi	nī	wasi	agn, tu	ororo	gapa, apapa	dabori
Koita	foro	beruma	fugesara	ugu	—	homo	tago	bagu	vanomo
Koiari (inland, Cent. Div.)	beima	foro kia	kuruku	ugu	—	fomo	tago	bagi	kolo
Sogere (inland, Cent. Div.)	hogoho	hogoho	—	ugu	—	—	ago	bego	—
Kagi (inland, Cent. Div.)	hisai	beima	—	ugu	—	—	taro	bego	—
Iaibu (extinct, Cent. Div.)	ova	hisai be-ovo	—	teboari	—	iguvi	iaa	pavai	itu
Alone (extinct, Cent. Div.)	tarotaro	taro neiana	—	kana	lakeki	—	rara	ba-baroku	—

¹ *ti*, cf. *titi* = tattoo; *giri* (kiwai) = knife.² Verbal nouns in the Binandele dialect, to which these four dialects belong, take the suffix *ari*.

poa words occur in South Eastern New Guinea Melanesian dialects in places contiguous to the two boundary lines of Papuan speaking peoples, and that the latter people in both areas use similar words for tattooing [*foa* (Toaripi) and *buā* (Maisin)] would seem to indicate that the word may have a Papuan origin. On the other hand it is unlikely that the art can have taken its rise independently in Papuan culture, for the skin of this race is too dark to display patterns tattooed upon it. Moreover, the Binandele tribes, who scar but do not tattoo, and who inhabit the country immediately north of the Maisin tribe, have the words *taro* for scarring and *taroro* for tattooing. I do not think, therefore, that *poa* is a Papuan word, and the suggestion I make is that *poa* is a term which reached South Eastern New Guinea earlier than *revareva*, *aloalo*, and *kurikuri*, and that some of the Papuan coastal tribes were so far affected by the culture of an early wave of migration as to have borrowed the word from the people who composed this wave.

Revareva.

Lawes, in his *Motu Grammar and Vocabulary* gives as the meaning of *revareva*, "tattooing, anything striped or variegated; hence writing, printed matter." The Sinaugolo term for tattooing, *belabela*, is perhaps the same word as *revareva* by inversion. Relying upon this assumption there are good reasons for concluding that *belabela* is the purer form, for *belabela* means tattooing in the Aru islands, and cognate words having the same meaning are *belbela* at Timor laut, and *belbel* in the Kei Islands.¹

In one of the Amboyna dialects the word for butterfly is *pepeul*, and Codrington has pointed out that this word reappears in slightly altered forms in the Solomons and the New Hebrides²; and, further, he expresses the opinion that *ul* (*pepe* being a very common word for butterfly in Oceania) may be the same word as the Malagasy *lolo*, meaning butterfly. I have already suggested that *olo* is a flying or feather derivative, and it seems not improbable that the Kei Islands *belbel* (tattooing) is cognate to *pepeul* (butterfly). If this be so, the Timor laut *belbela* and the Aru Islands *belabela*, have almost certainly, and the Sinaugolo *belabela* has very probably, been derived from the same source.

In the "wing" column of the comparative vocabulary it will be seen that some New Guinea dialects have *pepe* and words of similar construction; and such words occur also in Melanesia for wing. It is possible, therefore, that *pepe* (butterfly) and *pepe* (wing) have the same root, and the sense conveyed by the word appears to be something that remains suspended in the air by fluttering as opposed to suspension by a sailing or soaring method of flight [cf. *faapepepepe* (Samoa) = flutte³].

¹ *Tutuwiren* (Joest), pp. 7 and 8.

² *Melanesian Languages* (Codrington), p. 63.

³ *Pepe* (Motu) = flag, pennant, i.e., a thing that flutters, and *Kaubebe* (Motu) = butterfly.

There is, however, room for doubt on the question as to whether the Motu *reva* (tattooing) is an inverted form of the Sinaugolo *belabela*, for in the dialect spoken at Mangareva, which has many words in common with Western Papuo-Melanesian dialects, *repa* means tattooed, and some other meanings of *repa* in Polynesia are in accord with Lawes' translation of the Motu word "anything striped or variegated," such as "the border or edging of a garment" in Tahiti and Hawaii.

In Tahiti the cuckoo, *Eudynamis Taitensis*, which has a long tail conspicuously barred with alternate dark brown and dull yellow, is called *areva reva*¹. The New Zealand bush-hawk (*Harpa ferox*), called by the Maoris *Karewarewa*, *Karearea* or *Kacaea*, has black tail feathers, each of which is barred by a series of seven narrow white bands. In New Guinea the sea-snake, *Platurus colubrinus*, which is marked with alternate bands of chocolate and yellow, is called by the Motu tribe *koko-rereva*, and in the Eastern portion of the Papuan Gulf (from Orokelo to Kerema) *hahereva* means feather. *Reva* in these words seems to indicate the idea of a pattern consisting of contrasting light and dark colours in symmetrical alternation; that is to say, a balanced pattern. (Cf. *rererea* (Dobu) = equal.)

Alo.

The Mailu *tarotaro*, the Wedau *ruru*, and the Binandele *taroro* are seemingly the same words as the Hula and Aroma *aloalo* in varying forms. It appears not improbable that *ruru* is cognate to *oro* and *rere* denoting flight, and it is noteworthy that in some Melanesian and Polynesian dialects *alo* occurs as a word indicating the same idea. Thus *alo* = wing and *aloalo* = butterfly (Ysabel)²; *aroarouchaki* (Maori)³ = to float in the air as an albatross without moving the wings; *lofa* (Tonga), i.e., *alofa*³ = to fly with extended wings. The New Guinea tattooing words belonging to this group may possibly be related to the following Melanesian words denoting ghost; namely: *ataro* (S. Cristoval) = spirit or ghost; *ti'ndalo* (Florida) = spirit of a dead man; *tataro* (Banks Is.) = beings addressed in prayer. And there may be a further sequence of ideas leading from ghost to invocation, in which case perhaps the following Polynesian words belong to the same category:—*talo* (Samoa) = prayer; *tarotaro* (Tahiti) = a short prayer to the gods; *Kalokalo* (Hawaii) = prayer; *tataro* (Gilbert Is.) = prayer.

Uri or Kuri.

Throughout Oceania the root of words meaning hair and feathers appears to be *ulu*, and the Southern Massim nouns for tattooing, namely: *kurikuri* (Bonabona),

¹ This bird appears in the tattooing of women on the island of Lauenia in the form of a flying-bird, and the pattern is called *arewa* (Thilenius in *Nova Acta*, vol. 80, p. 43).

² Codrington, *op. cit.*, p. 41.

³ Tregear's Dictionary.

uri (Dau), *ululi* (Goodenough Is.) are seemingly derived from that root. Friederici shows that certain words in Western Papuo-Melanesian dialects have undergone a phonetic change, and among these he places the Western Papuo-Melanesian words *hui*, *bui*, etc., meaning hair or feather. *Hui* and *bui*, he states, were originally *hulu* and *bulu*.¹ A similar change appears to have taken place in the S. Massim words now under consideration, the *l* or *r* in these words, however, having been retained. Cognate examples in Melanesia of this form of change are provided by the words: *umri* (Anaiteum), *ului* (Aurora), *uli* (Meralava), *ului* (Motu), which all denote hair (and ? feathers). At Wedau an alternative word to *ruru* = tattooing is *giruma*, and this is probably the same word as the Oian word *kirukirum* = tattooing. *Iru* in *giruma* and *kirukirum* is apparently *uri* by metathesis, and here again cognate examples are to be found in Melanesia, e.g., *ilu* (Api), *ilu* (Whitsuntide Is.) *ieu* (Alite, Malanta), which mean hair (and ? feathers). If these several assumptions are admissible it is a fairly safe deduction that the *uri* and *kuri* words for tattooing are derived from words meaning feathers, a deduction which is supported by the South Massim Tubetube and Sariba word *daguri* = feather.

V.

SECOND VOCABULARY.

The native names of birds in the following list were all collected by me saving those in the Kiwai dialect, those belonging to Collingwood Bay, and some Binandele words, which were respectively obtained for me by others. It is possible that the list contains inaccuracies here and there, for the reason that mistakes are liable to occur unless the bird for which the name is wanted can be shown to the native. It is seldom safe to rely upon the translation by a native into his own dialect of the name of a bird known to him and to the enquirer in another dialect, but this risk must sometimes be taken if the bird the name of which is wanted is not at the moment in sight. Some of the birds given in the Vocabulary do not appear in the body of this paper, but I have thought it as well to include them in case their native names may be useful to other enquirers.

It will be observed that in some cases a name which denotes a certain bird in one dialect denotes some other bird in another dialect. Thus *binam*² = frigate-bird at Ubir and Oian (Collingwood Bay) appears as *bina* = hornbill in four of the easternmost Western Papuo-Melanesian dialects, and in Dau (S. Massims). Again, *aisava* (Mailu) = frigate-bird becomes *airava*,³ etc. = hornbill in the three western-

¹ *Op. cit.*, vol. iii, p. 93.

² The question as to whether there is a connection as between the *bina* and *binam* words for hornbill and frigate-bird, and the Massim ceremonial axeblades called *benam* would form an interesting subject of enquiry.

³ The suffixes *rava*, *laba*, *sava*, probably denote "great"—*rava* in Melanesian dialects very commonly having this meaning.

most Western Papuo-Melanesian dialects. Perhaps, too, *bulibwali* (Trobriands) = fish-eagle is the same word as *buliali* (Nara) = frigate-bird. This perplexing confusion is not peculiar, apparently, to the above-mentioned tribes, for the Barriai tribe of South-western New Britain also seems to have interchanged the names of two birds. They call the noddy tern (*Anous stolidus*) *taule*,¹ and the frigate-bird *raila*.² *Raila* is probably = *aila* (this tribe having the habit of introducing "r" into words, as, e.g., *pore* for *poe*, a paddle) and *aila* is most likely an abbreviated form of *ailava*, meaning hornbill at Waima and Nara, and of *aisava*, meaning frigate-bird at Mailu: and *taule* is with equal probability the same word as the New Ireland *daula* and *ndaul*, meaning frigate-bird. The frigate-bird and the noddy tern are, of course, both sea-birds, but they are so far unlike each other that whereas the frigate-bird is a large bird with wide wing-spread, and a stately sailing method of flight, the noddy is by comparison a small bird, and, like all terns, flies in a restless, fluttering manner.

Under pattern No. 8 I have given some reasons for supposing that in certain circumstances the substitution by a tribe of one kind of bird for another kind of bird may take place owing to a similarity of habit or appearance. The interchanges of frigate-bird and hornbill names given above must, however, be due to another reason, for it would be absurd to suppose that any native could see any resemblance, either in appearance or habit, between a frigate-bird and a hornbill. The frigate-bird being essentially a marine bird and the hornbill as essentially a forest bird, suggests the possibility that originally one may have been the tutelary bird of a sea-going folk and the other the tutelary bird of a bush folk. It is conceivable that in the region of the Dampier and Vitiaz Straits the migrating peoples coming from the west and feeling their way along the coast line would pause for a time among the sheltered islands which abound in this vicinity,³ with the result that tribes before then unknown to each other would meet, and there might follow as a result of their meeting some overlap and confusion of culture. Perhaps it was due to some such circumstances as these that the interchanging of the birds under notice took place.

The words given in the Vocabulary for fish-hawk do not necessarily stand for a particular kind of fish-eating hawk, though all of them designate large raptorial birds. Generally speaking, they are words for the kite—*Milvus affinis*; but names for the fish-eagle (*Haliaeetus leucogaster*), and the osprey (*Pandion leucocephalus*) may be among them. The latter bird is, in my experience, rather rare in South-eastern New Guinea; kites are very common, especially in the vicinity of coast villages; fish-eagles are met with fairly frequently. The Motu word for fish-hawk

¹ Friederici, *op. cit.*, vol. ii, pp. 195, 196.

² Cf. Friederici, *op. cit.*, vol. iii, p. 13.

SECOND VOCABULARY.

Dialect	1 Crow <i>Corvus corax</i>	2 Fish-hawk <i>Halioetus leucogaster</i> , <i>Pandion leucocephalus</i> , <i>Milvus affinis</i> .	3 Cockatoo (white) <i>Cacatua triton</i>	4 Cockatoo (black) <i>Micropterus albertinus</i>	5 Tern <i>Sterna sp.</i>	6 Frigate-bird <i>Fregata aquila</i>	7 Torres Strait pigeon <i>Myristicivora spilorrhoa</i>	8 Hornbill <i>Rhytidoceros plicatus</i>	9 Reef-heron <i>Demigretta sacra</i>
Kiwai (Fly River)	oa	kauro	kēa	kapia	oromo sarari	aro	gimai	wāa	wowogo ea
Tato (C. Cupola, Gulf)	—	laho	eo	iore	—	aro	—	haima	poe
Mekeo (W. P. Mel.)	—	laho	pasava	kiyeva	ison	—	—	itava	poe, lele
Waima (W. P. Mel.)	wangu	foi	engo	ino	—	—	kofi	latuapa	foe
Nara (W. P. Mel.)	ao	po'i	apena	bihiau	lau	arean	lauia	atava	poe
Motu (W. P. Mel.)	alo	—	deva	—	—	buliali	peionaro	allava	—
	galo	hogibada, gamoga	karai	kitogalo	kanage	munkon, kidu	bune	bobero	nogo
Hula (W. P. Mel.)	kao	amoa	kalai	kiola	anave	kobe	pune	bina	pogi
Sinaigolo (W. P. Mel.)	gato	gamoga	—	kitavara	—	kokobe	bune	bina	—
Aroma (W. P. Mel.)	kao	amua	alai	ivala	kanave	kokobe	pune	bina	boi
Mallu (W. P. Mel.)	a'e	amua	orana	ma'i	anave	aisava	vula	bina	boi
Dani (S. Massim)	boiboi	magesubu	vadea	mo'ila	mogo	davasi	gabubu	bina	boi
Maiwara (S. Massim)	bucelaco	manubada	keoi	katiawa- cawa	—	gugnepo	gabubu huire	esagana	—
Wedau (S. Massim)	ogaoga	manubada	keloi	kapikoa	—	gugudaro	gabubu	binama, ta- guna	—
Dobu Is. (S. Massim)	kaukau	bwoeba	keioi	n.f.	mekera	dawat	bunebune	n.f.	boi
Goodenough Is.	—	—	—	—	—	—	—	—	—
Panaieti Is. (S. Massim)	waiawai	mambutu	kakauwe	n.f.	malela	dauwai	bune-e-bune	binama	apoi
	ovak	magesubu	etakena	n.f.	manu kela- kela	lawat	lumum	n.f.	boi

	1	2	3	4	5	6	7	8	9
Kiriwina (N. Massim) ...	kwaiaota ...	magesubu, mu-nuweka, buli-bwali	katakela ...	n.f. ...	kanau waga ...	dauke ...	bubune ...	n.f. ...	boi ...
Murua (N. Massim) ...	auwau, kawa-wa	—	atakeia ...	n.f. ...	—	dauke ...	bobuna ...	n.f. ...	boi ...
Sudest Is. (Louisiades) ...	waluo ...	malā ...	takena ...	n.f. ...	kannkana ...	dawate ...	bunabuna ...	n.f. ...	boi ...
Rossel Is. ...	owa ...	malā ...	kua ba ...	n.f. ...	sea-a-bibi ?	7 n'gwō ...	iyam ...	n.f. ...	boaijo ...
Main (Collingwood B.) ...	owa ...	onenga ...	keken ...	wangi ...	—	atiwa ...	uno fceia ...	n.f. ...	—
Olan (Collingwood B.) ...	awan ...	manubed ...	kasak ...	walkira ...	—	binam ...	unak ...	jagam ...	—
Onjo (Collingwood B.) ...	owe ...	—	kawa ...	akio ...	—	atekela ...	andi ...	kōnkōn ...	—
Ubar (Collingwood B.) ...	owe ...	manubad ...	kasak ...	walkir ...	—	binam ...	mofo ...	jagam ...	—
Kworali (C. Nelson) ...	oga ...	lihnu ...	angia ...	walkira ...	—	atiwa ...	gumbara ...	beremo ...	—
Okein (C. Nelson) ...	oga ...	bangai ...	ang-ena ...	mo-iki ...	—	sa-umbo ...	gumbara ...	beremo ...	—
Winiapt (C. Nelson) ...	awawa ...	neduna ...	kasawa ...	walkira ...	—	fanaioyo ...	inako ...	yagama ...	—
Arifamu (C. Nelson) ...	awowo ...	neduna ...	kasawa ...	walkira ...	—	fanaioyo ...	unago ...	yagama ...	—
Upper Musa River ...	owowa ...	amosa ...	woiko ...	uko ...	—	inui ...	ubani ...	peremo ...	—
Lower Musa River ...	oa ...	udū ...	sagai ...	waki ...	—	atiwa ...	gumbara ...	peremo ...	—
Binandele ...	owa, oga ¹ ...	duna, bung ¹ ...	ata, agina ¹ ...	kiwai, kilol ¹ ...	kanau ...	baruga, onono ¹ ...	gumbara ...	biama, bene-mu ¹ ...	poi, poi iya ¹ ...
Koita ...	gaioka ...	duna, boibada ...	kac ...	kerea ...	kanage ...	kiduka ...	bune ...	gure ...	noko, boi-bedi (spoon-bill) ...
Kaiari (inland, cent. div.) ...	makafaka ...	—	kaiia ...	hirora ...	n.f. ...	—	biakai ...	gure ...	ebogi ...
Sogere (inland, cent. div.) ...	makafaka ...	—	kaiia ...	bahuto ...	n.f. ...	—	bla ...	gure ...	ebogi ...
Kagi (inland, cent. div.) ...	n.f. ...	n.f. ...	gū'a ...	biola ...	n.f. ...	—	n.f. ...	bobori ...	n.f. ...

NOTE—the letters n.f. denote that the bird is not found in that tribe's district.

¹ Buna Bay: the other Binandele words were obtained on the Mambare River.

(*Milvus*) is *bogibada*.¹ Similar words in Motu are *bogebada* and *bo'ebada*. These variations in the pronunciation of the word occur in archaic chants sung on ceremonial occasions, the meaning of the words of which has been lost, and it is possible, therefore, that *bogebada* and *bo'ebada* may originally have had some other meaning than fish-hawk. At Waima the bird is called *po'i*, and at Toaripi *foi*. *Bogibada* and its variants are compound words, *bada* meaning "great," but *bogi*, *boge*, and *bo'e* have no meaning in the Motu dialect. It is, however, not unlikely that originally they bore the same meaning as the Mailu word *bo'i*, which, according to Malinowski, means an "innocuous kind of ghost," or, alternatively, "the spirit which dwells in the severed and preserved skull." I have pointed out that the suffix "*lava*" to many frigate-bird and hornbill names probably denotes "great." The suffix "*bada*," which frequently occurs in fish-hawk names, undoubtedly has that meaning. The sense implied by these qualifying suffixes is most likely to be that of pre-eminence rather than of size, in the same way that *bada* is used in the compound word *taubada*—literally "great man" but actually meaning "master."

The widely diffused word *poe* for reef-heron is possibly derived from an Indonesian root for "white"—a root which carries the same meaning in many Melanesian dialects. As one form of the reef-heron has snow-white plumage, the bird, perhaps, owes its name to that peculiarity, or it is possible, though less likely, that the bird's name is derived from the common Oceanic word *po* or *boi* = night, owing to its habit of homing to its roost at dusk. A third possibility is that *poe* (reef-heron) and *bogi* in *bogibada* (fish-hawk) are the self-same words, of which the original meaning was ghost or spirit.

The Binandele word *baruga* for frigate-bird deserves passing notice for the reason that it may be cognate to a group of Southern and Northern Massim words meaning ghost or spirit. Thus, for example, *arua* (Wedau) = shade, spirit, reflection, image; ² *karua* (Sariba) = ghost; ³ *yaruyarua* (Tubetube) = spirit of the dead; ⁴ *barom* (Trobriands) = shades of the dead.⁵ These words again may be possibly cognate to *varua* (Tahiti), *vaerua* (Mangaia), *wairua* (Maori), etc., meaning soul or spirit.

The question pertaining to the origin of the Oceanic names of certain birds, and the overlapping confusion which has occurred in regard to some of these names, is extremely complicated and difficult to solve. The result of a broad survey of the whole question has led me to think that the race from whom the Oceanic people obtained their bird cult regarded certain large birds, not as birds, but as spirits; or, to be more precise, as the visible vehicles of the spirits or ghosts of dead persons.

¹ Cf. *bogi sapulo* = *Haliaeetus leucogaster*, a totem bird of the Barriai in N. Britain (Friederici, *op. cit.*, vol. ii., p. 187).

² *Wedau Grammar and Dictionary* (Copland King).

³ *British New Guinea Annual Report*.

⁴ *Melanesians of B. N. Guinea* (Seligman) p. 657.

⁵ *Melanesians of B. N. Guinea* (Seligman) p. 734.

On this assumption many of the difficulties I have mentioned would disappear, for the names of these birds would be the names of incarnations rather than of birds—the birds themselves being of secondary importance. It is much easier to account for a change of names taking place as between those of ideas such as incarnations than between those of visible objects such as different kinds of birds. This theory would also account for the apparent anomaly presented by carved representations of birds on Massim canoes—such as, for instance, a bird's image with a pronounced crest being called *boi*—a reef-heron—this being a bird without a crest.

I was once the fortunate witness of an incident in New Guinea which was perhaps the survival of a custom of the people who introduced the bird cult to Melanesia. Westward of the Trobriand archipelago there is a collection of islets known as the Lusancy Group. These islets being situated in dangerous uncharted waters, and having no importance for traders, were at that time seldom visited by Europeans. I went there once only in the course of a sea journey from Cape Nelson to Kiriwina in the Trobriands, and anchored off a diminutive inhabited island named Simsim. Whilst I was being pulled ashore in the ship's whaleboat my attention became fixed upon a small flock of terns which, with unusual fearlessness, accompanied us, hovering low over the boat. On nearing the shore two men emerged from the village houses and walked down to the little beach. One of the terns thereupon left the flock and flew towards the men, and after circling over them for a few moments, it perched, to my amazement, upon one of their heads. The man appeared to be quite oblivious of the bird's presence, which remained seated on his head till we landed. In the village there were two or more tame reef-herons of the white variety walking about leisurely among the houses, and several Torres Straits pigeons which were unconfined, and flew among the village people, settling upon them fearlessly. During the short time I was there the terns every now and then flew in a flock from the village to the sea, where they plunged for fish for a few minutes and then returned to the village again. I had no interpreter with me who could speak the dialect of these islanders, and was consequently unable to ascertain any particulars regarding the meaning of this singular intimacy between them and the birds, but it is significant that in the Massim area terns, reef-herons, and Torres Straits pigeons are all common totem birds.

VI.

TATTOOING LEGENDS.

Motu.

In ancient times tattooing was effected by painting the tattoo patterns on the skin with *lamanu* (tattooing pigment). This caused blood to flow without giving pain. But one day when a woman was beginning to tattoo a damsel she (the woman) broke wind, and the damsel thereupon laughed loudly so that the woman

became greatly ashamed. The woman said nothing, but when the damsel arose, she (the woman) took some of the damsel's blood and put it on a green ants' (*birairo*)¹ nest. Next time the woman was occupied in tattooing no blood flowed as it had been wont to do before, so she went away and got a small thorned twig, and returning tried to make the blood flow by pricking the skin therewith. Then blood flowed, but pain was caused. Therefore the woman spoke, saying: "If you [plural] do not laugh at me this tattooing will not give you pain, but if you laugh at me I shall take damsel's blood and put it on a green ants' nest, and the ants will gather together about the blood, and then this tattooing will be a different thing and will cause pain."²

[I have translated this legend from the Motu as written in that dialect for me by Ahuia.]

Koiari.

[This legend appears to be fragmentary. The Koiari is a Papuan bush tribe living inland of Port Moresby. The people of this tribe do not tattoo, with the exception of the Sogeri branch.]

Buda and Soli were two good-looking unmarried young women. They tattooed each other and collected the blood in a vessel and Soli hid it in a house. Soon afterwards they heard the blood cry out and when they looked they found the blood had turned into a female child, and Soli took it and fed it at her breast. When the child had grown up she [the child] collected a quantity of grasshoppers and took them to the house of Buda and Soli. Soli and Buda ate the grasshoppers and they stuck in their throats. So they said to the girl: Why don't you get a husband who will pay for you in wallobies and pigs, which we can eat instead of these nasty grasshoppers?—Then the girl went away and fell asleep in the jungle. While she was asleep an old man came and saw her, and he put her two breast nipples in his mouth, and then he too fell asleep beside her. When the girl awoke she stood up and withdrew her breast nipples from the man's mouth. Then she plucked two flowers from a vine and putting one in each corner of her mouth, she went to Buda and Soli and said: "You virgins! (*Kiomu kaka!*)³ Why did you send me into the bush for an old man to bite my breasts?"

¹ These ants (*Oecophylla* sp.) infest the bushes and trees in the Port Moresby district. They are also to be found in great numbers in the scrub on the waterless coral islands in that neighbourhood. They are very fierce, and their bite is painful. They make nests by drawing the green leaves of trees or bushes together, and binding them in a compact mass by a substance exuded from their mouths.

² Cf. the Maori legend of the origin of tattooing, which affords an interesting parallel of the idea that tattooing was evolved from skin painting. (See *Ancient History of the Maoris*, White, ii, 4, and *The Maori Race*, Tregear, p. 259.)

³ *Kio kaka* — a Motu expression meaning *virgo intacta*, literally, vulva red. In the sense in which it is used in the legend, the expression appears to have been meant derisively. The legend was obtained for me by a Koita man who was intimate with the Koiari tribe.

Dau.

[The following legend is quoted verbatim from *The Melanesians of British New Guinea*, page 493, Seligman. That part of the legend relating to tattooing appears to be merely incidental, and the legend, therefore, contains little of interest in connexion with this subject. Saving the reference therein to tattooing, it bears close resemblance to the Taupota Folk-tale "The Frog Witch," on p. 401 of the same book.]

A woman man-eater, her village on Bonarua : she lived in a hole in the rock : also a small girl, her village was Bonarua. This girl was given to wandering about. At all times her mother and father they said, "Don't wander, or else the sorceress in the bush will eat you." The girl did not listen, she walked about. The old woman saw the girl and called her and said, "You come!" The girl went and with the woman came to the cave and stood outside. The sorceress said to the door of the cave, "Open!" and it opened. The two entered the cave, whereupon she tattooed her. She commenced at the face and went down even to her feet. She boiled the blood and ate it. When she had finished the tattoo on another day the sorceress said to the girl, "You stay, I go and seek our food." She lied to the girl, her idea was to go far searching, that she might eat her on the morrow.

Therefore she, the girl, considered : she thought, "I will speak to the door to open." She said "Door, you open!" and the door itself opened and the girl ran away to her father and mother. She said, "The sorceress caught me, to-day she would have eaten me." Therefore her father baked a stone wherewith to kill the sorceress. The sorceress arrived at her cave and found no girl. Then she sought and went to the girl's father and mother and asked. They said, "She is here." Then she said, "My grandchild there bring to me!" The girl's father said, "Yes," then spoke down and said, "Open your mouth and I will show your grandchild to you and you can swallow her." And the girl's father threw the hot stone and she swallowed it and died. Therefore the girl's tattoo they afterwards imitated.

VII.

SUMMARY.

Although there are indications which point to a large number of the tattoo patterns discussed in this paper being derived from birds, the only two kinds of birds definitely specified by name are the frigate-bird and the hornbill. Frigate-bird patterns are tattooed at Waima, Mailu, and by the Southern Massims ; and a similar convention of the same bird is painted on the face by one or more of the tribes of Collingwood Bay. Patterns named after the hornbill are of rarer occurrence, being worn on the deltoid region of the arms by males at Hula and Aroma. Centipedes are definitely specified by name in many of the Western Papuo-Melanesian patterns as well as in those tattooed by the Southern Massims. The latter people have one or more patterns called by words meaning "snake," but there is no clear evidence that

snakes are figured in Western Papuo-Melanesian tattooing designs. The almost total absence of fish-patterns is remarkable unless the *ialata tarana* design is an original name, and not, as I have suggested, an assumed name. With regard to the derivations I have suggested for the other pattern names there is not sufficient evidence absolutely to justify the connections, but if I have not pressed my deductions unduly they appear for the most part to be associated with ideas of flight and feathers, and here and there, perhaps, with stars.

I have given reasons for thinking that some bird names are primarily the names of spirits or ghosts, and it may be that all objects which remain suspended in the atmosphere without visible support and which are capable of moving with great rapidity through that medium, such as birds, butterflies and meteors, were thought by the early Oceanic people to possess spiritual attributes. Birds which have the habit of sailing aloft with rigid wings appear to have made a stronger impression on the minds of these people than birds with a fluttering manner of flight: hence, perhaps, the importance in Melanesian religious conceptions of large raptorial birds and of frigate-birds.¹ It is to be noted, however, that hawks are not represented in tattooing—at all events not by name.

The importance of feathers is very marked in Oceania and there would seem to be some obscure association of ideas between feathers and body hairs, especially pubic hairs, and between these and tattooing. It is at any rate noteworthy that words for feather and pubic hair should be so commonly identical in Melanesian and Polynesian dialects, and that the tattooing of those parts of the body where hair grows is so persistent a custom. In parts of Fiji, for instance, where a few years ago tattooing (*ngkia*) had otherwise become an obsolete practice, the females were still almost invariably tattooed round about the vulva. And the Western Papuo-Melanesian tribes are at great pains to tattoo the whole surface of the armpits. The Melanesian-speaking tribes of South-east New Guinea have all a deep-seated repugnance to allowing their body hair to grow, a feature which is more or less common, I believe, throughout Melanesia and Polynesia. Unmarried girls of the Motu group of tribes who have reached, or are approaching puberty, even go so far as to remove eyebrows and eyelashes before attending a feast or dance ceremony. It is to be borne in mind, however, that tattooing the region about the vulva may have originated in the idea that maleficent spirits would thereby be prevented from entering the body by that orifice, or that beneficent spirits might be induced to enter. Chin and lip markings, and the wearing of nose sticks, and ornaments in the ear-lobes, may

¹ In Borneo the Kayans watch for an omen before preparing the ground for sowing padi; the omen bird being a hawk (*niho*). If the hawk sails around *without once flapping his wings*, it is regarded as a propitious sign. *The Home Life of Borneo Head Hunters*, Furness, p. 162.

Some of the large kinds of butterflies and particularly the *Ornithoptera*, which latter are fairly common in Indonesia and New Guinea, also have the habit of soaring with rigid wings.

be due to the same conception, but this supposition cannot, apparently, account for armpit tattooing.

There can be little doubt, I think, but that tattooing as exemplified in Oceania is founded in a religious impulse. The silence preserved during the performance of the operation in South-east New Guinea even down to the present day; the mere fact of arbitrarily drawing human blood which the operation entails; the importance laid upon the effusion of blood in the Motu legend; and the miracle, described in the Koiari legend, of the blood thus drawn changing to a human being,—all point to the rite having a religious origin. A few instances of tattooing ritual culled from other parts of Oceania which seem to support this theory may be quoted here. At San Cristoval drums are beaten at prescribed intervals during the operation. It is a fairly safe assumption, I venture to think, that the beating of drums in Melanesia is, or was in former times, associated with the presence of spirits, though in the account which follows the writer states that the drums are beaten at San Cristoval in this case for the purpose of communicating information to other villages. In this island of the Southern Solomons tattooing is called *uhuhu*,¹ and the operation is performed by male professionals. "The patterns tattooed are: above the nose a frigate-bird and lines over the eyebrows to represent the evening sky; beside the eyes circles representing the fruit of a certain tree, and on the cheeks, clouds and birds' wings alternately. . . . When one half of the face is done, drums are beaten to announce the fact to neighbouring villages, and when the frigate-bird is finished the drums are beaten again."²

In Samoa we have seen that the operation was concluded by a festive procession of the priests and their assistants accompanied by a ceremonial removing of the *tabu*.³

The Marshall Islanders chant a song during the performance of the operation, accompanied by the beating of drums. I quote one verse of the song: "The chant rises to the gods and inspiration returns to the artist. Beat the drums, beat them in the circle. The black noddy tern (*Tölpel-seeschwalbe*) flies by with wings outspread. Its blackness falls upon the tattooing. Make the lines well, you tattooers."⁴

¹ At Florida (S. Solomons) hair or feathers is called *ulu*, but in the neighbouring island of Malanta *uhuhu* means hair or feathers.

² *Many-sided Melanesia* (Coombe), p. 315.

³ See p. 41.

⁴ *Hawaii, Ostmikronesien und Samoa* (Krämer), p. 408.

A SKETCH OF THE ANTHROPOLOGY OF ITALY.¹

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I.—ANTHROPOLOGICAL DATA OF MODERN ITALIAN POPULATIONS.

PROFESSOR GIUSTINIANO NICOLUCCI, who held the Chair of Anthropology in the University of Naples with so much brilliancy, was the first to undertake a complete study of Italian Anthropology,² which appeared thirty years ago. It is a weighty work, which is still useful to consult, because, as the author was extraordinarily erudite, we find used there all the preceding literature on the subject. Two parts are more amply discussed: the prehistoric part, which includes the Ligures, the Umbrians, the Oscians, the Pelasgi, the Japiges-Messapi, the Euganeans, with the Veneti, the Etruscans, the people of so-called Greater Greece, the Phœnicians and the Gauls or Celts: and the part which deals with barbarian invasions and foreign colonies in Italy. The least developed part is that on present-day anthropology, entitled "The Modern Italians": it suffices to say that the Ligures, who had given so much material for prehistoric enquiries to the author, do not even appear in the tables of the various regions of Italy. In any case little or nothing which is satisfactory to modern scientific needs can be got from the tables compiled by Nicolucci; the author does not specify which series he studied or used, and results which have been obtained since do not at all confirm the figures he gives.

Eleven years after the appearance of Nicolucci's treatise another scholar, a specialist in glottology, Professor F. L. Pullè, published his "Profilo antropologico dell' Italia,"³ in which the most important place is given to linguistic facts and the smallest to somatic data: for these last are used those already obtained by Livi, who elaborated the anthropometric material gathered at the levies for the army,⁴ but not taken by him in person as has been erroneously believed. Finally, this same

¹ This article is presented by the author for the purpose of expressing his thanks for his election as Hon. Fellow of the Royal Anthropological Institute of Great Britain and Ireland on 11th December, 1917.

² Nicolucci, G., "Antropologia dell' Italia nell' evo antico e nel moderno," *Atti R. Accad. sc. fis. mat.*, vol. ii, serie 2a, Napoli, 1888. This same work published as a reprint bears the date 1887, as it was really presented to the Academy at the meeting of July 10th, 1886.

³ Pullè, F. L., "Profilo antropologico dell' Italia," *Arch. per l' Antrop. e l' Etnol.*, xxviii, 1898, fasc. 1. Before this Pullè had published a long chapter in vol. iv of Marinelli's *La Terra*, called "Le lingue e le genti d' Italia" (pp. 467-508), in which he specially illustrates the prehistoric peoples of Italy, always basing himself on literary and linguistic texts.

⁴ Livi, R., *Antropometria militare*, Parte i, Roma, 1896. Part ii was published in 1905.

Livi wrote in 1907 a brief summary called "Geografia antropologica dell'Italia."¹

* * * * *

Height.—Nicolucci calculated the average height of Italians to be 1636 mm., adding 10 mm. to the average of conscripts measured between 1874–84, i.e., 1626 mm., which is only a little higher than that which Livi² obtained for the 1855–59 classes, i.e., 1624, on a total of 1,350,799 measured. Livi gave previously³ the average height of the incorporated soldiers or recruits of the 1859–63 classes, that is of 299,355 individuals: this average height was 1645 mm. and is mentioned by Deniker.⁴ But it is evident that this height cannot be preferred to the other, which is that of *all* individuals at 20 years of age, and Livi himself, in fact, in his ethnological comparisons, only uses the figures relating to conscripts instead of those higher, which relate to recruits incorporated in the army.

It seems that Deniker thought he might consider as the average height of the whole male population, either the average + 10 mm. obtained from the conscripts, or the genuine average obtained from recruits, believing that the two figures must be the same "à un demi-centimètre près,"⁵ but it is easy to see that the difference is greater than 5 mm. In fact the difference between 1634 mm. (i.e., 1624 + 10 mm.) and 1645 is 11 mm., and this difference is constantly positive, as I have been able to verify in all the sixteen departments of the kingdom.⁶

On the other hand, it is certain that in two years' time the average growth of soldiers is 9·8 mm.,⁷ therefore, if we add 10 mm. to the average height of the conscripts at 20 years of age, we have the height of the whole male population at 22 years of age and the ulterior growth (from $\frac{1}{2}$ to 1 cm.) can be neglected, as such growth is compensated later in the mass of the population by the decrease in height (from $\frac{1}{2}$ to 1 cm.) after 50 years of age. According to this reasoning the *average height* of the whole male population in Italy is 1634 mm., and we may conclude that Nicolucci's figure was fairly exact.⁸

¹ It is part of a volume by Livi, R., "Antropometria nei suoi rapporti con la Medicina sociale," from the *Trattato di Medicina Sociale, Sanità Psichica*, edited by Fr. Vallardi.

² Livi, R., "Sulla Statura degli Italiani," *Arch. per l'Antrop. e l'Etnol.*, 1883, p. 376.

³ *Op. cit.*, Part i, p. 32.

⁴ Deniker, J., *Les races et les peuples de la terre*, Paris, 1900, p. 662. This average is erroneously given to be for 344,371 individuals. The average 164.00 cm., is given by Martin, R., *Lehrbuch der Anthropologie*, Jena, 1914, p. 214, without giving the number of measured, and it is one of the very few data which Martin gives on Italy in his tables.

⁵ Deniker, J., "Les six races composant la population actuelle de l'Europe," *Journ. Anthropol. Inst.*, 1904, pp. 194–195.

⁶ Giuffrida-Ruggeri, V., "Differenza di statura fra coscritti e reclute nelle diverse regioni d'Italia," *Riv. geogr. Ital.*, xii, 1905, fasc. ix.

⁷ Livi, R., *op. cit.*, Part ii.

⁸ In his large memoir ("Les Races de l'Europe. II.—La Taille en Europe," *Ass. franç. pour l'avancement des sciences*, Congrès de Lyon, 1906. Paris, 1908, p. 27), published later, Deniker asserts that the average height of Italians is 1647 mm., from figures given by De' Rossi. He holds

The female height in Italy is, according to the data given by Raseri,¹ on an average 9 cm. lower than the male; there is, in fact, a difference of 8 cm. between males and females in Southern Italy and 10 cm. between males and females in Northern Italy.

Colouring.—Considering two pure types of pigmentation, that with black hair and black or dark eyes and that with fair hair and blue or light-coloured eyes, the first, generally called the "brown," is found on a general average² of 25·4 per cent., the second of 3 per cent. Other two types, which may be called the mixed brown and the mixed blond, are also found, the first on an average of 50·1 per cent., the second of 9·3 per cent. A rosy colouring of the skin seems to be represented by 38·59 per cent.

Shape of the hair.—Curly hair is only found in 3·3 per cent., wavy in 13·5 per cent., straight in 83·2 per cent.; but this last category is uncertain, as properly to observe it the hair should be fairly long and not as it is worn by men at 20 years of age; it is probable that many classified as straight-haired should really be classed as wavy-haired. Much better data could be obtained from females.

Cephalic index.—The cephalic or cephalometric index taken on 294,271 Italians gives an average of 82·7,³ but really this is an average without significance: only two provinces, those of Pisa and Salerno, give such an index. From this index, taken on the living, it is necessary for technical reasons to subtract—according to Livi—not less than three units to get the cephalic index of the skull. Roughly we can say that a little less than half the Italians are brachycephals.

Nasal index.—This index was measured on 2696 Italian soldiers from all the districts⁴ and gives an average of 68·54. We know also the proportion per cent. of the "naso arricciato," which Livi believes to represent the concave nose,⁵ but might also include the nose with a wavy bridge (a variety of the aquiline bridge), which has nothing to do with the concave nose, and naturally we cannot be sure that all the doctors who compiled the tables of individual characteristics understood also (pp. 6-7) that for low heights it is necessary to add 20 mm. instead of 10 mm. to the height of the conscripts at 20 years of age; but I do not believe that short men who belong to a short race grow 20 mm. in two years, as may happen to those under-developed of a tall race.

As to the figure 1632 given by De' Rossi for the last levies considered by him, it may represent the tendency to reach the definite height more precociously: there is therefore even less reason to add other 15 mm. as does Deniker to get the height 1647 mm.

¹ Raseri, E., *Materiali per la Etnologia Italiana*. Roma, 1879.

² Livi, R., *op. cit.*, part i, p. 60.

³ Deniker, J. (*op. cit.*, p. 673), gives the same index for 294,160: this figure is not correct; see Livi, R., *op. cit.*, part i, p. 257.

⁴ Mori, A., "Alcuni dati statistici sull' indice nasale degli Italiani," *Arch. per l'Antrop. e l' Etnol.*, xxvii, 1897, p. 219. This series is not found in Appendix iii of the above-mentioned manual by Deniker, nor in the *op. cit.* of Martin. The latter does not even give the nasal index of the Italian skeletal series, only making an exception (on p. 835) for the Pompeians measured by E. Schmidt.

⁵ Livi, R., *op. cit.*, Part i, pp. 105-106.

well Livi's idea. To confirm such a doubt, there is the fact that for single districts, Mori's data prove a very different bearing of the nasal index from that which one should have on a basis of the so-called "naso arricciato"; contrary to what Livi would conclude, it has not yet been demonstrated that Northern Italy is more leptorrhine than Southern Italy. It seems that the brown dolichocephal of the peninsula is more leptorrhine than the brachycephal, but certainly other inquiries are necessary.¹

Cranial capacity.—The general average of the capacity of 212 Italian skulls measured with shot by Mantegazza is 1390 c.c., or 1484 c.c. for the men and 1316 c.c. for the women,² the absolute difference between the two sexes being 158 c.c. If the male capacity be considered as 100, the female would be 89.2: almost the same proportion is obtained by uniting many series measured by divers anthropologists in all the districts of Italy.³

Weight of the brain.—The average given by Calori for the weight of male Italians' brains is 1308 gr., but it is an average which is awaiting confirmation, as, according to Topinard, it does not give all the required guarantees,⁴ as it deals with weights obtained by different observers and for other reasons. Leaving aside individuals below 20 and over 60 years of age, male brachycephals give 1314 gr. and dolichomesaticephals 1287 gr.; on the contrary, for females the dolicho-mesaticephals give 1183 gr. and the brachycephals 1162 gr. These are statistical contingencies which have no definite significance, in fact they rather demonstrate that the difference in weight between the narrow and the broad is negligible, contrary to the opinion of Calori and Martin, who also take no account of the difference in stature. If one accepts an average brain-weight of 1308 gr. and an average cranial capacity of 1474 c.c., the relation between the two is 88.7/100.

The figure 88.7 is very close to the coefficient 87 found by Manouvrier in the French series and can be used to obtain the probable brain weights of the various districts of Italy. Leaving aside other data concerning the totality of Italians, we will pass on to the single districts.

* * * * *

Piedmont.—The Piedmontese, says Nicolucci, is of a medium stature, arms and legs strong and muscular. His colour is more brown than white, hair often chestnut, rarely fair; eyes generally grey-green, large and open, the forehead high, straight

¹ This is demonstrated for the female sex: cf. Montessori, M., "Caratteri fisici delle giovani donne del Lazio." *Atti. Soc. Rom. Antrop.*, xii, 1906, fasc. 1, p. 94. A greater skeletal platyrrhiny seems to be found in the islands.

² Figures given by Amadei, G., "La capacità del cranio negli alienati," *Arch. per l'Antrop. e l'Etnol.*, 1882, p. 187.

³ Giuffrida-Ruggeri, V., "La capacità del cranio nelle diverse popolazioni italiane antiche e moderne," *Atti Soc. Rom. Antrop.*, x, 1904, p. 262.

⁴ Topinard, P., *Eléments d'anthropologie générale*, Paris, 1885, p. 570. Calori, L., "Del cervello nei due tipi brachicefalo e dolicocefalo italiani," *Mem. dell'Accad. delle Sc. di Bologna*, Serie ii, Tom. x, 1870. See also Nicolucci, G., *Il peso del cervello dell'uomo*, Napoli, 1881.

and wide, the nose somewhat fleshy, lips generally narrow and the face nearer to the square than to the round or oval.

The average height of Piedmontese conscripts of the 1855-59 classes is 1627 mm., by adding 10 mm. to which we obtain the average height of the whole adult male Piedmontese population = 1637 mm. The height of soldiers ("enrolled" as distinct from "conscripts," who are all the males of 20 years of age) is 1649 mm.; we find it referred to by Deniker, *i.e.*, 22 mm. higher than that of the conscripts, and for the above-mentioned reasons it cannot be adopted.

For the pigmentation, using Table No. 15 of Livi's work, already mentioned, we have this percentage: for the pure blond type 4·8, for the mixed 13·0, for the pure brown 17·4, for the mixed 41·5.

The average cephalic index we take from Table No. 24 of the same work, which gives for Piedmont 85·9, the highest cephalic index of all the provinces.

The nasal index of 310 Piedmontese measured by Mori gives an average of 67·29.

On 100 Piedmontese skulls the maximum of frequency of the nasal index was found at 48, according to a table published by Professor Sergi.¹ In another table, published by the same anthropologist, are listed 60 nasal indices of Piedmontese skulls, without indication of sex, from which I have obtained an average nasal index of 46·95.

For the cranial capacity we can take the male to be 1500 c.c.² and the female 1375, with a difference between the two sexes of 125 c.c. Thus, multiplying these figures by the coefficient 88·7, we obtain the average brain-weights of 1330 gr. for the males, and 1219·6 gr. for the females.

Liguria.—The Ligurian is markedly different from the Piedmontese: as noted by Livi, the head is more dolichocephalic, the hair and eyes much more brown, the height generally greater.

The average height of Ligurian conscripts of the above-mentioned classes was 1636 mm., which, with the addition of 10 mm., gives the general average height of male Ligurians as 1646 mm.

For the pigmentation we have these percentages: for the pure blond type 3·5, for the mixed 10·5, for the pure brown 21·1, for the mixed 47·6.

The average cephalic index is 82·3.

The average nasal index of forty Ligurians measured by Mori was 65·37, the minimum for all Italians.

¹ Sergi, G., "Liguri e Celti nella valle del Po," *Arch. per l'Antrop. e l'Etnol.*, xiii, 1883, fasc. 2^o, tab. xi, p. 172.

² See Sergi, G., "Liguri," etc., *loc. cit.*, tab. viii; Giuffrida-Ruggeri, V., "La capacità," etc., *loc. cit.*, p. 258. As the single capacities are missing in Sergi's tables it is impossible to give the precise average: if we refer to the group of greater frequency the male capacity must be considered lower than 1500 c.c., perhaps 1450 c.c. Lombroso in 28 normal Piedmontese crania obtained an average of 1429·9.

Passing from the living to the skeletal material, some results have already been published by me,¹ others I have taken from my tables: in 56 male Ligurian skulls (of which 38 were Genovese) I obtained an average cephalic index of 79·34; in 68 female Ligurian skulls (of which 38 were Genovese) the same index is 79·89.

The same series slightly diminished (55 men and 63 women) gave me the nasal index of 45·44 for the male skulls and 47·26 for the female, thus the total average is a little lower than the Piedmontese total average.

Lombardy.—The Lombard is most like the Piedmontese, only he is a little taller, more blond and with a longer skull than the Piedmontese. The average height of Lombard conscripts was 1632 mm., therefore for the whole adult male population 1642 mm.

For the pigmentation the percentages are: for the pure blond type 4·3, for the mixed 11·7, for the pure brown type 20·1, for the mixed 44·5.

The average cephalic index is 84·4.

The nasal index of 169 Lombards measured by Mori gave an average of 67·31.

The cranial capacity of 55 men of Pavia was 1393 c.c., taken with millet.²

In the province of Brescia 326 brains with the meninges were weighed by Tenchini³ (as Broca had already done), 159 male and 167 female; the average male weight was 1320 gr. and the female 1194 gr., the sexual difference being thus 126 gr.

Venetia.—Nicolucci says the Venetians' height is greater than that of other Italians, the colour of their skin is between white and brown, hair almost always chestnut, often also quite blond; the iris is generally of a dark colour but not infrequently more or less blue, nose short and fleshy; the face wide and round, with the cheek-bones somewhat extended to the sides and the jaw wide towards the corners, so that we find this part in the same vertical line with the zygomas.

The average height of Venetian conscripts is 1653 mm., so that we get 1663 mm. for the whole adult male population, which is slightly less than 1679 mm., the average obtained by Viola⁴ on 350 Venetians.

¹ Giuffrida-Ruggeri, V., "Crani Siciliani e crani Liguri," *Atti Soc. Rom. Antrop.*, xiii, 1907, fasc. i.

² The individual figures are to be found in a publication by Zoja, G., *Il Gabinetto di Anatomia normale della R. Università di Pavia*, Osteologia, Pavia, 1874. The cephalic indices of these same skulls are probably lower than the real index, as the transverse diameter was taken by Zoja "from the most prominent part of one parietal protuberance to the other," instead of the maximum width of the brain case. The nasal index is missing.

³ Tenchini, L., *Sul peso dell'encefalo, degli emisferi cerebrali e del cervelletto nei Lombardi della provincia Bresciana*. Parma, 1884, pp. 4-5.

⁴ Viola, G., "Le dimensioni dell'uomo medio normale veneto," in the work by De Giovanni, A., *Studi di morfologia clinica*. Vol. ii., Padova, 1905.

For the pigmentation we have these percentages : for the pure blond type 5·4, for the mixed 14·2—these are the highest figures of those obtained from all the Italian regions ; for the pure brown type 18·6, for the mixed 41·8—on the other hand, these figures are not the lowest, as they are somewhat higher than those obtained in Piedmont.¹

The average cephalic index is 85·0.

The average nasal index of 67 Venetians measured by Mori was 66·73.

In the *Trentino* the data from the levies which we have, gathered and used by other methods, are not always comparable with those used by Livi ; the fact remains that the proportion of tall individuals is somewhat inferior to that which we find in Venetia and very inferior to that in the Tyrol ; the opposite proportion is found for the low statures.¹ In the many cranial series studied by various anthropologists the dolichocephals do not reach 1 per cent. and the same is found on the living ;² the proportion of brachycephals and hyperbrachycephals is about 80 per cent.

The leptorrhines and the mesorrhines are in almost equal proportions along with a considerable proportion of platyrrhines, i.e., 26 per cent. in 110 skulls from the Fassa valley. For the pigmentation the data only concern school children.³

Emilia, Marche, Umbria.—In the inhabitants of these three districts Nicolucci recognises the "Umbrian type."

The average height of Emilian conscripts was 1639 mm., therefore for all adult male Emilians we have 1649 mm. ; proceeding in the same way, we have for Umbrians 1636 mm., and for Marchigians 1633 mm.

The pigmentation in the three districts is very closely related, especially in the mixed brown type, for which the percentages are : in Emilia 50·2, in the Marche 49·0, in Umbria 48·7 ; correlatively blonds are more frequent in Umbria, 3·8, than in the Marche, 2·7, or in Emilia, 2·3.

The greatest difference is in the cephalic index, which is, on an average, 85·2 in Emilia, while it is 84·1 in Umbria and 84·0 in the Marche. But in Emilia itself there are notable differences, as Romagna, which makes part of it, is much more brachycephalic than all the rest of the Po valley, whilst the mountain population of the Emilian Apennines is only slightly brachycephalic.

The highest average nasal index for the whole kingdom is that obtained on 90 Umbrians, viz., 70·37, while 208 Emilians gave an average of 68·68, and 112 Marchigians 67·26.

¹ Moschen, L., "La statura dei Trentini," *Atti Soc. Rom. Antrop.*, Vol. i, 1893, p. 84.

² Moschen, L., "Note di craniologia Trentina," *Atti Soc. Rom. Antrop.*, v, 1897, p. 11. A plan of cephalic indexes compiled for 12,000 Tyrolo-Trentino skulls can be found in Ripley, W. Z., *The Races of Europe*. London, 1900, p. 291.

³ Moschen, L., "I caratteri fisici e le origini dei Trentini," *Arch. per l'Antrop. e l'Etnol.*, xxii, 1892, p. 106 et seq.

For Emilia we have some examples of anthropological observations confined to one town, Bologna. It is surprising to find that while Livi gives a height of 1642 mm. for Bolognese at 20 years of age, Riccardi¹ gives higher averages beginning at 17 years of age, and as the definite height (from 26–35 years) he gives 1696 mm., which is nearly equal to the average found by Peli² for adult Bolognese, *i.e.*, 1697 mm.

For the female sex Riccardi gives 1553 mm., which is a sexual difference of 14 cm., and Peli gives 1549 mm., almost reaching the sexual difference of 15 cm.

In the cranial capacity also, measured with shot, the sexual difference in the Bolognese appears very high, *i.e.*, 183 c.c., according to what I have gathered from Moschen's tables,³ 189 c.c. in another series studied by Zanolli,⁴ making the male capacity 100; the female is only 87, below the average of such a comparison in Italy. This is in correlation with the great sexual differences in height.

Zanolli has also compared his series of Bolognese skulls with a series of skulls from Todi (Umbria), of 47 male and 63 female. In this series the average male capacity being 1498 c.c. and the female 1356 c.c., the difference is reduced to 142 c.c.; the average cephalic index oscillates around 82 for the Bolognese as well as for those from Todi, and the nasal index around 47.⁵ On the other hand, from eighty-five Umbrian skulls from Ferentillo, measured with shot by Professor Sergi, I get 1490 c.c. for the male sex and 1308 c.c. for the female: sexual difference 182 c.c. The brain weight is also notably different in the two sexes in Emilia: Pini⁶ gives for 30 male Bolognese 1330 gr. and for 30 female 1175 gr.

Tuscany.—In Tuscany, says Nicolucci, we still see physiognomies which recall the ancient Etruscans: the Tuscans are generally of medium height, but tall men are not infrequent; the colour of their skin is brown, and their hair generally dark; black eyes, rarely blue, large and wide open, an oval face, slightly wide at the line of the cheek-bones; a high, straight, clean-cut nose, delicate lips, somewhat pointed chin, a sweet and expressive countenance, especially in the women, who are generally pretty and pleasing.

The height of Tuscans—adding the usual 10 mm. to that of conscripts—gives an average of 1649 mm.

¹ Riccardi, P., "Statura e condizione sociale studiate nei Bolognesi contemporanei," *Arch. per l'Antrop. e l'Etnol.*, xv., 1885, p. 104.

² Peli, G., "Sulle misure del corpo nei Bolognesi, ricerche antropometriche," *Mem. dell'Accad. delle Scienze di Bologna*, 1881, S. iv, T. ii.

³ Moschen, L., "Nuova contribuzione allo studio della craniologia dei Bolognesi," *Atti. Soc. Rom. Antrop.*, viii, 1901, pp. 18–20.

⁴ Zanolli, V., "Studi di antropologia bolognese, Part I, Crani e mandibole," *Atti Accad. scient. Ven.—Trent.—Istria*, Classe I, Anno V, Padova, 1908.

⁵ For the exact figures see Zanolli, V., "Saggio di craniologia tuderte," *Atti Accad. scient. Ven.—Trent.—Istria*, Padova, 1912, p. 10 of the reprint.

⁶ Pini, G., "Sopra il rapporto fra il volume ed il peso specifico dell'encefalo umano," *Atti Soc. Rom. Antrop.*, Vol. vii, 1900, p. 111. Here are cited the preceding results of other authors: Franceschi, who was able to weigh 400 Bolognese brains, obtained somewhat higher figures, whilst Gaddi obtained much lower figures for Modena.

For the pigmentation we have these percentages: for the pure blond type 3·3, for the mixed 9·8, for the pure brown type 22·0, for the mixed 47·7.

The average cephalic index is 82·3.

The average nasal index of 760 Tuscans, measured by Mori, is 69·09.

In Tuscany it is necessary to distinguish the *Lucchesia* and the *Garfagnana*, as these two regions belong to a population which is among the tallest in the kingdom and tends to dolichocephaly, as already noted by Lombroso.¹ By adding 10 mm. to the height of conscripts from the Garfagnana ("circondario" of Castelnuovo) we get the average height of 1672·5 mm., which is the highest in Italy.² The average cephalic index of this same "circondario" seems to be 78·2. In the female sex of the Lucchesia we also find very tall statures: in 114 women the greatest frequency was noted at 1570 mm.³

As to Tuscan skeletal material, the study made by Bianchi⁴ of forty male skulls and fifty female from the town and surrounding country of Siena abounds in detailed observations, but the averages—because of a hostility towards averages, which became fashionable some time ago—are missing and cannot even be exactly deduced. Without the averages the most important means of presenting anthropological phenomena is absent; these phenomena cannot be summarised in any other way. We can say approximately that the capacity seems very near to that of the Piedmontese. It seems also that prognathism is relatively notable, and is almost invariably alveolar. There has also been noted a great variety of morphological characteristics depending upon the mixture of brachycephals (which are in the majority) and dolicho-mesaticephals.

Latium.—The Roman type has been much debated; different opinions are held, principally by Nicolucci, who affirms its existence, and by Livi, who is of the opposite opinion. The question, however, has been resolved by an exhaustive study of the female sex. Dr. Maria Montessori, having measured 200 women of Latium, was able to conclude that there are two distinct types:⁵ the dolicho-mesaticephalic (cephalic index 76), brown, short (1·53 m.), more leptorrhine (nasal index 61), which was numerically prevalent and the other which is taller (1·57 m.), brachycephalic (cephalic index 83), blond and less leptorrhine (nasal index 65).

For the male sex the average height of conscripts from Latium being 1623 mm., we get for the whole adult population 1633 mm.

¹ Lombroso, C., "Note di antropometria della Lucchesia e Garfagnana," *Annali di Statistica*, 1878.

² Cf. *Atti Soc. Rom. Antrop.*, xii, 1906, p. 340.

³ Pittaluga, R., "Studio antropometrico sulle donne della Lucchesia," *Atti Soc. Rom. Antrop.*, xv, 1908, p. 19.

⁴ Bianchi, S., "Craniologia dei Senesi odierni," *Arch. per l'Antrop. e l'Etnol.*, xiv, 1884, p. 319.

⁵ Montessori, M., "Caratteri fisici," etc., *loc. cit.*

The percentages of pigmentation are: for the pure blond type 2·0, for the mixed 7·3, for the pure brown type 26·1, for the mixed 52·9.

The average cephalic index is 81·0.

For the nasal index we find, in Mori's tables, only 21 persons from Latium, who give an average index of 69·71. This much higher figure than that which we have in the nasal index of the women measured by Montessori makes us inclined to think that Mori's indices are all higher than they should be for the male sex, but it is not possible to determine by how much: other investigations are necessary.

The cephalic index of 44 male skulls of so-called modern Romans—they are really of very different derivation, from Old and New Latium—studied by Nicolucci¹ gave an average of 78·2: he got the same average in a small series of female skulls. The average capacity of 41 skulls measured with sand was 1513 c.c.

Abruzzi, Campania, Puglie, Basilicata, Calabrie.—All these districts correspond anthropologically to the southern type of the Italian peninsula, which is thus described by Nicolucci. The height is generally below the medium, the colour of the skin somewhat brown, although white and flesh-coloured skins are not lacking. The hair is almost always black, black the lively, penetrating eyes; a slim figure without adipose and without a paunch. They have not a very wide forehead, but it is high and flat, the eyebrows thick and arched, the nose high and clean cut, the chin slightly pointed.

In the height we find much resemblance in these five regions. We have—with the usual addition of 10 mm. to those of conscripts—the following averages: Abruzzi (and Molise) 1617, Campania 1620, Puglie 1613, Basilicata 1599 (which is the minimum for the whole kingdom), Calabrie 1604.

For the pigmentation we have a characteristic augmentation from north to south, as we have for the mixed brown type the following percentages: Abruzzi (and Molise) 50·8, Campania 54·7, Puglie 55·2, Basilicata 56·0, Calabrie 62·2.

The average cephalic index presents a general diminution towards the south: Campania 82·1, Abruzzi 81·9, Basilicata 80·8, Puglie 79·8, Calabrie 78·4.

The homogeneity of the meridional type is well seen in the nasal index, in 188 Abruzzese 69·77, in 116 Campanians 69·68, in 185 Pugliese 69·49.

A series of 100 Neapolitan skulls were studied by De Blasio,² 50 male and 50 female. The male averages were: cephalic index 77·3, nasal index 46·56, cranial capacity 1294 c.c.; difference between the two sexes 107 c.c.

The cranial capacity of the Pugliese was higher: 57 male skulls measured

¹ Nicolucci, G., "Antropologia del Lazio," *Atti R. Accad. Sc. fis. mat. di Napoli*, 1875, Vol. iv.

² De Blasio, A., "L'ossuario dell' Annunziata di Napoli," *Riv. mens. di Psich. for., Antrop. crim. e sc. affini*, 1903, p. 123.

with shot by Moschen¹ gave an average of 1494 c.c. and 31 female skulls 1340·8 ; difference 193 c.c.

Sicily.—Nicolucci does not find the Sicilian type so uniform as it is generally believed to be ; others, on the other hand, find it indistinguishable from the meridional type as a whole. Both judgments may be true, according to the degree of analysis which one has in mind. For example, it is difficult to find a difference between Sicilians and the above-mentioned Southerners in the statistics of the levies.

The height of the whole adult male population—adding 10 mm. to that of conscripts—is 1618 mm.

The average cephalic index of 32,526 Sicilians given by Deniker is 79·0 by a misprint, it being really 79·6.

The nasal index of 382 Sicilians measured by Mori gave an average of 70·0.

Many series of Sicilian skulls have been measured.² The most homogeneous is that of Mondio, made up of modern Messinese, 100 men and 80 women. In this series the average cephalic index for the male sex was 75·81, for the female 75·08. The averages agree with the results I obtained from a more numerous series, that of the Anatomical Institute of the University of Catania (but which came from various parts of the island), the 113 male which I measured being one-half with an index below 75·0 and one-half with an index above, whilst the 90 female skulls gave an index somewhat higher.

For the average nasal index on the skeleton Mondio gives 48·05 for the male sex and 49·78 for the female. As to distribution by categories I have been able to see that the leptorrhines (up to 47·0) make up 40·2 per cent., as in the male so in the female series ; therefore, as the majority is above such an index, an incipient skeletal mesorrhiny is demonstrated for the whole population.

For the cranial capacity Mondio obtained an average of 1398 c.c. in the male sex and 1256 c.c. in the female, a difference between the sexes of 142 c.c.

In the 210 skulls measured by me with shot (120 male and 90 female) I obtained an average of 1330·6 c.c. for the males and 1239·6 c.c. for the females, a difference of only 91 c.c. between the sexes,³ but probably I had struck an exceptional series (in the collections of anatomical institutes there are easily included by preference those abnormal skulls which occur in dissections), as it seems to me that the male capacity is too small. We must also remember that their belonging to the lowest social class influences the result.

¹ In an unpublished work : see Giuffrida-Ruggeri, V., *La capacità del cranio*, etc., where there are other indications (i.e. for Venetians, Istrians, etc.) not included in this sketch.

² See principally : Moschen, L., "Quattro decadi di crani moderni della Sicilia," *Atti Soc. Veneto-Trentina di Sc. natur.*, Serie II, Vol. I, fasc. ii, 1903 ; Mondio, G., "Studio sopra 200 teschi messinesi : 180 appartenenti a sani, 20 a delinquenti," *Arch. per l'Antrop. e l'Etnol.*, xxvi, 1897, fasc. 3 ; Giuffrida-Ruggeri, V., "Crani Siciliani e crani Liguri," *loc. cit.*

³ Giuffrida-Ruggeri, V., "Terzo contributo all'antropologia fisica dei Siculi eneolitici" *Atti Soc. Rom. Antrop.*, ix, 1905, fasc. 1, p. 82, in a note.

Sardinia.—In Sardinia also Nicolucci finds very different types according to districts; he agrees with Father Bresciani, from whom he takes the following description:—"The Sardinians have thick and very black hair, some plait it and some allow it to fall on to their shoulders with locks each side on their temples. They have a brown skin, but this is darkest towards the South Cape and gradually acquires lighter shades as we proceed northwards, until we find the vermilion and white cheeks of the Fonnesi and Gallurani. They have black vivacious eyes . . ."¹ He also notes the difference in height between the Sardinians of Cape Calaritano, a very small people, and the tall people of Logodoro, Gallura and Nurra with thick beards.

As the average height of all Sardinians of the male sex we have 1601 mm., the height of conscripts being 10 mm. lower.²

For pigmentation we have these percentages: for the pure blond type 0.5, for the mixed 2.9; for the pure brown type 25.4, for the mixed 70.4; these are the minimum and maximum figures respectively for each type, found in Italy.

The average cephalic index is also the minimum, 77.5: in the province of Cagliari it is 77.2 and 78.1 in the province of Sassari.

For the nasal index, only 35 Sardinians are found in Mori's tables, and these give an average of 68.82, which is a little higher than the index 66.6, obtained from 86 Sardinians measured by Gillebert d'Hercourt.³

Much skeletal material from Sardinia has been gathered in the museums of the island and the Continent. The Sardinian collection in Rome, at the Collegio Romano, has been excellently well studied by Professor Duckworth of Cambridge.⁴ The cephalic index of the male series (70 skulls) gives an average of 71.53, the nasal index 49.0, the cranial capacity, calculated according to Lee's formula, 1426 c.c., a very high capacity, considering the low height of Sardinians. The female series gave, cephalic index (32 skulls) 71.94, nasal index 49.2, cranial capacity 1252 c.c., difference between the two sexes 174 c.c. The females are less orthognathous, having the alveolar index 96.48, while the male is 95.2. On the whole the Sardinians are more dolichocephalic than the Sicilians (a difference of 4 units) and equally mesorrhine, with a much greater sexual difference in the cranial capacity. Given the low stature it seems as though this sexual difference was out of proportion, especially as it is not confirmed in other series. A series, partly unpublished, by

¹ Bresciani, A., *Dei costumi dell' isola di Sardegna comparati agli antichissimi popoli orientali*, Napoli, 1850, Vol. i., p. 41.

² Professor Martin (*op. cit.*, p. 214) gives the stature of Sardinians as 1619*: this asterisk indicates that other 10 mm. must be added to get the correct height, 1629; but all this is completely erroneous, as it would mean an increase in stature amounting to 38 mm.!

³ Gillebert d'Hercourt, "Rapport sur l'anthropologie et l'ethnologie des populations sardes," *Arch. des missions scientifiques et littér.*, 3 série, t. xii, Paris, 1885, p. 42.

⁴ Duckworth, W. L. H., "A study of the Craniology of the Modern Inhabitants of Sardinia," *Zeitschr. f. Morphol. u. Anthrop.*, xiii, 3 (1911), pp. 439-504. In this article are cited other authors on the Sardinians.

Ardu Onnis, gives 1403 c.c. for 114 male skulls and 1298 c.c. for 97 female skulls, a sexual difference of 105 c.c.

Professor Duckworth himself compares the population of Sardinia with that of Corsica.¹ From anthropometric data, obtained by Jaubert, we get as the average height of 17,726 Corsican conscripts 1633·4 mm.² as cephalic index of 500 men 76·6. The strongest dolichocephaly is found in the mountainous district of Niolo, and is accompanied by greater height and a blond or light-chestnut complexion, instead of which the people of the mountainous districts of Sardinia, where also we find the greatest dolichocephaly, i.e., Lanusei and Nuoro, are the lowest in height and darkest in colouring.

According to Duckworth, a replacement of the primitive population has occurred in central Corsica, which has remained fairly pure in the mountainous districts of Sardinia. It is this original element which he has tried to isolate in his Sardinian series (11-12 skulls of 70), which present the characteristics of extreme dolichocephaly, a tendency to platyrrhiny and prognathism. The presence of this element—which is not the common Mediterranean element—explains why Sardinia is the most dolichocephalic of the Italian districts and has perhaps the greatest tendency to prognathism and curly hair.³ An ancient Pigmy element of African origin has been thought of by Professor Sergi, but this idea of an ancient Pigmy population in many parts of Europe has been abandoned in recent times: the facts on which it relied were perhaps only favourable to the demonstration of the presence of a Proto-Ethiopic element of low height, an hypothesis according to us more plausible, and which explains equally well the presence of certain equatorial characteristics.

* * * * *

If the so-called Latin Race really existed, the anthropology of Italy, as of a good part of Europe, would be very simple: it would be sufficient to describe the characteristics of this race. But he who tries to put together such a description finds out at once that things are very different, and that there are no physical characteristics which apply to all the representatives of the so-called Latin Race. He finds without fail that the physical characteristics are the most varied, and he has no criterion to select some and leave others aside: in these conditions it is not possible to give any description of this pretended race, and a race which cannot be described in its physical characteristics is purely imaginary, it does not exist in a zoological sense: of this cultivated people are generally persuaded. There exist instead somatic groups, or somatic unities, which we find among all the Latin populations, as we find them in the Anglo-Saxon, Slav, etc., populations. This inquiry

¹ Numerous literary references on the subject of Corsican anthropology are given by Professor W. L. H. Duckworth, *loc. cit.*, p. 480; see also Deniker, J., "La Taille en Europe," *loc. cit.*, pp. 34-36.

² For these an average increase in height of only 10 mm. between the 21st and 26th years has been ascertained (Duckworth, *loc. cit.*, p. 481).

³ Both facts are frequently mentioned by Sergi, G., *La Sardegna*, Torino, 1907, pp. 81-85. Figs. 23-24, 27-28.

constitutes the somatic analysis of a given population, and belongs exclusively to physical anthropology.

The physical anthropology of Italy can be described on broad lines and for this are especially useful the investigations in military anthropometry of Livi, who has co-ordinated them and summed them up with infinite care—or in the more detailed way by restricted and monographic investigations.

On broad lines we can say—and commonly the fact is clear even to the eyes of the vulgar—that there is a very evident somatic difference between the North and the South of Italy. The collections of skulls which have been studied, of these two large regions, have shown that the lower half of the peninsula and the islands have a very homogeneous population. It is certain that the fact of finding practically only certain cranial forms, ellipsoid, ovoid, pentagonoid, along with perfect orthognathism and a lepto-mesorrhine nasal index, gives us the right to think that we are dealing with a single, Mediterranean, race, without wishing to enter into the question whether this has not been originally altered by archaic similar forms, but which belonged to another race, less orthognate and less leptorrhine, and without wishing to exclude the possibility that some element, which can only be diagnosed by its very high stature and by depigmentation, has been incorrectly included among the Mediterraneans. *Vice versa*, the collections from the North show the opposite fact, that is, the prevalence of the different short forms, sphenoid, spheroid, etc., especially platycephalic,¹ the shapes of the so-called Eurasic stock; or, better, perhaps, of the Alpine variety; nevertheless, the homogeneity is less than in the South, as Mediterranean forms are fairly well represented.

We notice almost the same fact if we consider the maps of the cephalic index published by Livi: we see in Southern and Insular Italy the great prevalence of dolicho-mesocephals, in Northern Italy the preponderance of brachycephals, whilst in Central Italy first one and then the other prevail; that is, on the Adriatic slope, more often the brachycephals, on the Tyrrhenian slope the dolicho-mesocephals. In the North also we have not everywhere the same intensity of brachycephaly, but we have lighter spots which correspond to a considerable proportion of dolicho-mesocephals. When one also remembers that a part of the Mediterranean skulls, especially pentagonoid and ovoid shapes, pass into the first degrees of brachycephaly, the mixture in Northern Italy is still greater than that which appears from Livi's maps: in certain Emilian and Lombard provinces the cranial forms, which are really Alpine or Dinaric, make up less than half.² In Southern Italy, also, one has not everywhere the same intensity of dolichocephaly, as there are here and there unequal brachycephalic infiltrations, according to whether invasions have carried new

¹ See, for example, for Venetia: Tedeschi, E. E., "Studi di antropologia Veneta," *Atti Soc. Rom. Antrop.*, Vol. v, p. 49.

² Giuffrida-Ruggeri, V., "La statura in rapporto alle forme craniche. Note di antropologia Emiliana e Lombarda," *Atti Soc. Rom. Antrop.*, Vol. v, fasc. ii.

ethnic waves to one place rather than to another. It seems that these have quite spared the Garfagnana and in part Liguria also, especially the Gulf of Spezia, as the ancient dolicho-mesocephalic, brown, tall population has remained almost intact.

Nicolucci says that in Romagna one not infrequently meets men of a strong, robust figure, who are not incorrectly judged to be of Gothic origin, and also that the descendants of the Longobards have generally a high nose, somewhat thick towards the tip, rather prominent cheek-bones, the shape of the face between round and square; they are tall, of a white skin, with very light chestnut-coloured hair and often blond. He himself cites Maggiorani,¹ who says that the descendants of the Arabs in Sicily are recognisable by their height, brown colouring, slim, slight figure, long profile, deep-sunk eyes, which are black and shining, small mouth, aquiline nose, with only a slight depression at its root.

We have already seen that in colouring and hair the Italian population is by a very great majority brown: in fact not only is the Mediterranean race brown, but also the so-called Celtic race which predominates in the valley of the Po. The greatest quantity of really blond individuals, with blond hair and light eyes, is found in Venetia. In a less degree blonds are found all over Italy, not excluding the islands: in Sicily they are specially found in the province of Palermo, which is said to arise from the greater number of Normans who established themselves there. The Albanians, too, from investigations made in the province of Cosenza,² are found to be less pigmented than the Calabrians; it is sufficient to say that in 59 men fair hair was 27 per cent., light eyes 47 per cent., and white skin 67 per cent.; they are also taller (m. 1.64) and less dolichocephalic (cephalic index 80.6).

If we exclude Venetia and the Garfagnana, height in the rest of Italy is somewhat low, as the Alpine or Celtic race of the valley of the Po, as well as the Mediterranean, are both of low stature, with the difference that the first is more sturdy. In the south of the peninsula, especially in Basilicata, and in the islands, we have a large percentage of very short individuals, as we can see by the number of conscripts refused because of their height: we have the maximum of men refused in Sardinia, about 30 per cent. of the conscripts from the province of Cagliari do not reach the height of m. 1.46. In a very small degree this can be attributed to retarded growth.

It would be important to ascertain if there are differences in the various phases of growth between the different regions of Italy: it seems that the rhythm is not the same for the Romagnols and the Abruzzese.³ In the Abruzzese of Teramo it seems

¹ Maggiorani, C., "Reminiscenze antropologiche della Sicilia," *Atti R. Accad. dei Lincei*, 1871.

² Zampa, R., "Anthropologie Illyrienne," *Revue d'Anthropologie*, 2^e série, T. ix, p. 634. Unfortunately this important memorial is full of printer's errors: cf., by the same author, "Vergleichende anthropologische Ethnographie von Apulien," *Zeits. f. Ethnol.*, 1886.

³ Vitali, V., "Gli Abruzzesi," *Atti Soc. Rom. Antrop.*, vol. viii, 1901, p. 218.

that we have coefficients of growth below the sixteenth year which are superior to the respective coefficients in the Romagnols. The period of greatest growth occurs between the thirteenth and sixteenth year in the case of the Abruzzese and between the twelfth and fifteenth year in the Piedmontese.¹ It seems also that an acceleration of development has taken place generally throughout Italy in recent times.²

From what we have pointed out it is evident that there are many gaps, but they are not greater than those which we find in other European ethnographical regions; in fact, perhaps we may say that Italy is relatively better studied than any other. With the averages which we have given for the different districts, it is easy to construct a map of the geographical distribution throughout Italy of each somatic characteristic studied. A revision of Italian craniological data is at present being made from the point of view of the height of the skull,³ and promises to give important results.

II.—THE ORIGINS OF THE ITALICI PEOPLES.

Leaving aside all that refers to the Palæolithic age, in which Italy was much less favoured than were the other regions of Western Europe, Italian origins find a more solid base in the Neolithic age. From the Lombard plains to the Ionic shore archæologists have found the circular foundations of a number of huts half buried in the earth, which were inhabited by the families of a pastoral people who were united in real villages. The huts are hollowed in the ground on purpose, perhaps to frustrate the violence of the wind or to hide better the inhabitants from their enemies: as entrances we find either descending steps, or an inclined plane, or a shaft close to the hut. In these hut-foundations are found, not only weapons of polished stone, but all the remains of domestic crafts, amongst which the pottery is the most evolved in technique, form, and decoration.

With the hut-dwellers appear the first burials, the funeral rite is that of inhumation; the body was laid in the so-called "contracted" position, that is, lying on its side with the legs doubled up; it had beside it everything it could need in its life beyond the tomb. In the great Prehistoric and Ethnographical Museum in the Collegio Romano at Rome, such skeletons can be seen still in the earth, where they were found with funeral furniture which differs according to the sex. The caves generally served as cemeteries for the small neighbouring tribes; many have been explored, especially in Liguria, where are the famous Balzi Rossi (in dialect, "Bausse russe") caves, also called the caves of Mentone, which have given so much material

¹ Pagliani, L., *Lo sviluppo umano*, 2^a ediz. Biella, 1913, p. 35.

² De' Rossi, G., "La statura degli Italiani," *Arch. per l'Antrop. e l'Etnol.*, xxxiii, 1903, p. 63.

³ Pelizzola, C., "L' altezza del cranio nel Tirolo," *R. Ist. Lomb. sc. e lett., Rendic.*, XLVIII, 1915, fasc. 12; "Linee generali della distribuzione dell' altezza del cranio nella Penisola Italiana." Parte I, *Atti Soc. Ital. Sc. Nat.*, LVII, Pavia, 1918.

for study to French anthropologists. These caves are on the frontier between Italy and France, and close to the territory of the Prince of Monaco, who gave liberal sums to French archæologists and anthropologists to facilitate their exploration and study. They were inhabited and used as burial places even before the neolithic age, that is, at the end of the palæolithic age, to which belong the skeletons of a negroid type, which were found in them along with others, more recent, of the Cro-Magnon type, a type often found in France in the Magdalenian epoch. They therefore seem to belong in one sense to French Palæethnology and in others to Italian; their implements belong to the end of Aurignacian epoch, but the caves are related to the other neolithic caves of Liguria, examined by Professor Issel and other Italians, where also were found many skeletons which are now in the Geological Museum of Genoa. But characteristic neolithic Italian tombs are those excavated in cliffs, which Professor Pigorini¹ calls the "most ancient monuments of the European continent." These artificial caves, which are entered by an inclined plane, or by a cylindrical shaft, or by steps cut in the rock, are like a narrow oven, and in reality reproduce the type of dwelling of the semi-subterranean huts² mentioned above.

* The first to demonstrate the great importance of the study of prehistoric civilization was Gaetano Chierici of Reggio-Emilia, and in the Museo Civico of that town are preserved many skeletons of this epoch. After him a phalanx of students have inquired into our prehistoric origins, with results which have been much appreciated, as their studies have illuminated greatly the whole Italian neolithic age.

At the present day it seems that we can affirm that we are not dealing with local progress from the palæolithic age, and perhaps not even with a civilization which slowly introduced itself. Professor Pigorini, who has given his scientific life to this research, holds that although the old inhabitants remained here and there, it is certain that in the midst of them suddenly appeared a people whose usages, customs, arts and crafts are totally without relation to the past. These new inhabitants probably came from the East in canoes, and having crossed the Mediterranean, landed on the southern shores of the peninsula, as well as in Sicily and Sardinia. Among the ornaments abandoned on the floors of the huts and caves they left the shells of *Meleagrina margaritifera* and *Mitra oleacea*, which reveal the Eastern route.

Eric Peet, in his comprehensive volume dedicated to prehistoric Italy,³ writes, "They are no novices in the art of pottery-making,"⁴ and he also adds that they are a pastoral people and can be no other than that later called Ligures (Liguri) by

¹ Pigorini, L., "Le più antiche civiltà dell'Italia," *Bull. Palet. Ital.*, xxix, Nos. 10-12, 1904, p. 197.

² Pigorini, L., "Gli abitanti primitivi dell'Italia," *Atti Soc. Ital. per il prog. d. scienze*, 3^a riunione, Roma, 1910, p. 16.

³ In this highly recommendable work one finds amply expounded many investigations, here omitted, by Brizio, Orsi, Colini, Milani, Pinza and others.

⁴ Peet, T. E., *The Stone and Bronze Ages in Italy and Sicily*. Oxford, 1909, p. 165.

historians. He is uncertain whether the Ligures came by sea or by land, passing through Spain and Southern France. This latter route is certainly the longer, if they came from the East, because it means that they had to cross all Northern Africa to the Straits of Gibraltar, but it is perhaps the route most likely to be followed by a pastoral people.

It seems that the Siculi belonged to the same race as the Ligures, as they were all people of the "Mediterranean type." The descent of the Siculi from the Italian peninsula into Sicily is strenuously upheld by Professor Patroni,¹ as it seems confirmed by divers archaeological evidences; given the vicinity of the island to the mainland, it is very probable that this happened various times and came to the notice of historians, if even in Thucydides' times there were Siculi in Calabria. In many parts of the peninsula tradition mentions the Siculi, which would be difficult to account for as purely a fable. But the most ancient neolithic population, that which takes its name from Stentinello, a locality near Syracuse, must have come straight from the Eastern Mediterranean, probably from Crete, if Peet was able to assert that whoever examines the neolithic pottery to be found in the museums of Syracuse and Candia, sees at once that the Stentinello ware belongs to the same archaeological context as that which came from beneath the floors of the palace at Knossos and elsewhere in Crete.² At a later epoch, at the end of the neolithic age, in the cave of Villafraati, near Palermo, are also found the human representatives of an Oriental type (markedly brachycephalic skulls), together with the characteristic cup shaped like an inverted bell, whose prototype is found in the East.³ The legend of the Sicani-Iberi is now put aside, although in the western part of the island similarities to Iberian civilization of the same period are not lacking, but this is due to "that great wave of influence which touched the coast districts of Western Europe, bringing with it the dolmen and dolmen-pottery,"⁴ as the dolmen also appeared in the neolithic age and seem to be distributed according to certain lines of navigation and overland commerce.⁵ On the other hand it is certain that the brachycephalic skulls could not come from Spain, but rather from the high regions of Asia Minor.

Professor Patroni affirms that in the most ancient Sardinian tombs of oven-form, called "domus de janas" or "witches' houses" (*case delle streghe*), one finds numerous close resemblances to the dolmen civilization. Moreover, in Sardinia,

¹ Patroni, G., "La civilisation primitive dans la Sicile Orientale," *L'Anthropologie*, 1897, pp. 129 and 294.

² Peet, T. E., *op. cit.*, p. 135.

³ The question of the anthropo-archaeological concomitance has been lately dealt with in my article, "Antropologia e archeologia in taluni riguardi della preistoria europea," *Arch. per l'Antrop. e l'Etnol.*, xvi, 1916, fasc. 1-2.

⁴ Peet, T. E., *op. cit.*, p. 482.

⁵ Cf. Peake, H., "The Origin of the Dolmen," *Man*, xvi, 1916, No. 8, p. 116. The author, however, places the origin of the dolmen at a too recent epoch—that of metals!—whereas they begin in the neolithic.

the whole evolution of the dolmen is found: from the small dolmen which is only slightly raised above the level of the ground to the highest, from that constructed of a very few slabs of stone to that made of many stones, gradually lengthening until we find those corridors of tombs called by their local name of "Tombe di giganti." Parallel to that of the dolmen, we have the evolution of the "domus de janas," which, about 2000-1500 B.C., reached their highest development, as seen in the little caves of Anghelu Ruju near Alghero, explored by Antonio Taramelli. These necropoleis belong to what is called the "eneolithic" age, that is to an age in which copper was used as well as stone; in other words, we are at the beginning of the employment of metals. In these caves are buried the representatives of another migration, which came from the East, and this time the proofs are not simple shells but the pottery, which is found to be the same as that of Crete, the symbols expressed in relief on the walls and pillars of the tomb, the marble figurines of an asexual and also of a feminine type like those so well known in the Ægean, the betylic cult and the statue itself of a bull-god. The skeletons themselves, found in the necropolis of Anghelu Ruju, indicate their derivation, as, of 63 skulls studied by Professor Sergi,¹ 10 (that is 15.87 per cent.) were found to be brachycephalic and to belong to the so-called "Eurasians."

Another favourable indication of the Eastern source of this eneolithic people, who were known to the Egyptians of the XIXth Dynasty as "Shardana," is found in the megalithic architecture, known as Cyclopic constructions, introduced by them especially in the construction of the "nuraghi." These massive buildings, true fortresses of the epoch, had an evolution lasting many centuries, becoming continually more complicated and sumptuous in the metal age; in the beginning they were only stone huts resembling the conic brick huts which we find pictured in the Assyro-Babylonian bas-reliefs. Professor Patroni² has lately illustrated this analogy and indicated, in prehistoric Greece, at Orcomeno, the existence of huts with a base of stone and domed roofs of raw bricks. In the Eastern Mediterranean these raw bricks rapidly gave place to stone, which is explained by the abundant use already made of this material in the building of the dolmen, as well as by the fact that stone buildings made a much more valid and permanent defence, and therefore were better adapted to their needs.

There must have arisen an epoch of great power for Sardinia at this time, power which was never afterwards regained. Bronze was manufactured here on a large scale and also certainly exported. The cupriferous rocks, in which the island was rich, were diligently sought for by the Sardinians by an eager work of excavation and selection, in trenches, galleries and wells; as Taramelli has been able to verify

¹ Sergi, G., "Crani antichi della Sardegna," *Atti Soc. Rom. Antrop.*, xiii, 1907, fasc. 1.

² Patroni, G., "L'origine del nuraghe' sardo e le relazioni della Sardegna con l'Oriente," *Atene e Roma*, xix, 1916, Nos. 211-12-13.

by a series of investigations.¹ The remains, which he also found, of tin minerals in the form of cassiterite, show that importation from Eastern Europe was equally active to provide the material missing in the island and necessary for the preparation of bronze. It has also been stated that the Sardinians provided war material for the confederation of the "peoples of the sea" or their allies, the Libyans, who attacked Egypt in the twelfth century B.C.

Whilst the civilization of the dolmen and megalithic monuments flourished in Western Europe and in the Mediterranean, there was a different civilization in Central Europe; here we find a people who lived in the lake-regions on pile-structures (palafitte), a people whose history, says Professor Pigorini, "is written only in the refuse of their daily life, covered to-day by water and peat-bogs."² This people descended into Lombardy and occupied the ponds and lakes. Later, or perhaps contemporaneously, their kindred from the valley of the Danube penetrated into Venetia along the valley of the Adige; when they reached the Po they crossed it and invaded Emilia as far as the sub-Apennine hills. Their organisation appears very rigid and, I should say, inflexible, judging from the fact that wherever they settled to construct their stations they religiously erected a pile-dwelling, even though the spot was elevated and unadapted for such a construction: this is shown by divers pile-dwellings situated on hills. These little towns, with streets and houses all built on wooden posts, are called "Terremare."

These terremare are always quadrilateral, of a trapezoidal shape, closed by a rampart and a moat, across which was a single bridge which could be easily removed. This great enclosure was therefore a kind of fortress: in the interior it was divided by streets which crossed each other at right angles; these streets are banks of earth held up by rows of stakes, as was each house. A sacred part of the little town was reserved in the middle of the eastern side: it was a higher, quadrilateral area, to which, as it was surrounded by a moat, it was not possible to attain except by bridges. This little town, consisting of wooden houses regularly arranged, was many times destroyed and rebuilt as the years passed, for this happened as soon as the refuse filled up the space underlying each house; but each time the same regularity and order reappeared in the new town, thus excluding any individual initiative. This strict observance of rules implies a rigorous social organisation, a disciplined people, and a great respect for tradition. In their little towns the arrangement is identical with that which we find in "Roma quadrata," the city of Romulus; the highest part, that quadrilateral "area" described above, appears like the germ of the "arx," the prætorium and the forum.³ Moreover, the objects characteristic

¹ Taramelli, A., "I problemi archeologici della Sardegna primitiva," *Riv. di Antrop.*, xx, 1916.

² Pigorini, L., "La più antica civiltà dell'Italia," *Discorso letto nella seduta della R. Accademia dei Lincei*, il 7 Giugno, 1903.

³ Pigorini, L., "Gli abitanti primitivi dell'Italia," *loc. cit.* See also an article by W. Warde Fowler, published in the *Journ. of Roman Studies*, 1912, and an article by E. A. Horton, published in the *Rev. d'Ethnogr. et de Soc.*, 1913.

of the *terremare*-dwellers have been found in regions nearest the *Urbs*, that is in Sabine and in Marsica. On these resemblances depend the great importance of the *terremara*, which was the mother of the civilization of Latium, a very humble mother, as we find her in the Po valley. Without writing and without any indication of figured art, in possession of bronze which was melted but not hammered out, with her pottery almost without decoration—she was inferior in æsthetic taste to the Mediterranean civilization of the neolithic hut-dwellers. The difference appears evident even in the funeral rites, which demanded the cremation of the dead; this had to take place outside the *terremara*, so that it might not become a prey to fire; the few bones which remained among the ashes were collected in rude ossuaries, which were left uncovered and without funeral furniture. Sometimes these ossuaries have been found in a simulacrum of a pile-dwelling, fashioned like a *terremara* with its surrounding moat and wooden bridges at each side; this was the city of the dead. As we see, the bridge was an important part of all these constructions: it was the finishing point of the work, as certainly when the work was finished communications would be established and probably the bridge was inaugurated with solemnity and certain rites over which a priest would preside; the great importance of the *pontifex* is explained by its name.

Towards the end of the second millennium B.C., a great movement of peoples who came down from the north took place; the pile-dwellings of Eastern Lombardy and the *terremare* of Western Emilia were abandoned by their inhabitants. They had certainly been hunted out, while, on the other hand, the Ligures remained in the western regions of the Po valley until the time of the Gallic hordes. The dwellers in the *terremare* who were hunted from their homes by the Umbro-Sabelli were driven towards the Marche and the Tiber valley, and it seems that some reached the shores of the Ionic sea. If, really, as everything leads us to believe, their descendants were the Latins, the founders of Rome, it is necessary to say that their penury of brilliant gifts was perhaps compensated by a quality for organisation, and a spirit of discipline and frugality in their lives, which qualities we in fact find in the ancient Romans. Certainly their language was that called "Aryan," as was Aryan the language of the Umbrians, who also practised the cremation of corpses. The Osci, the Sabines, the Samnites, and other Sabellic peoples were Aryans or Aryanised, although they inhumated their dead instead of burning it. It is possible that the founders of Rome consisted of both families, as we find both rites in ancient Rome. In the Anthropological Museum of the University of Rome are kept twenty-eight skulls, all anterior to or contemporaneous with the walls of Servius Tullius; the great part came from a burial ground on the Esquiline. These skulls give an idea of a part of the population of Rome at the time of the Kings, but we have no idea of that other population which burnt its dead and left us only the ashes which are found in the famous hut-shaped urns of Latium. The population of the buried is

prevalently made up of the Mediterranean Race,¹ with skulls which are more or less long, a somewhat long face and a nose of medium thinness; but the population of the burnt, which must be that which is descended from the *terremare*-dwellers, was, perhaps, not of a Mediterranean type, or was not so to the same degree, as, given its derivation, it may have been made up mainly of representatives of *H. alpinus*. These hypotheses will remain always impossible to confirm.

We can say that the end of the second millennium B.C., especially the twelfth to eleventh centuries B.C., represent the period of settlement of the ethnical races in Italy as in a great part of the Mediterranean. The Umbro-Sabelli had chased the *terremare*-dwellers from Northern Italy, but had not remained there. There flourished the Euganeans, whose splendid necropolis is found at Este, near Padua, as the necropolis of the Veneti is found at S. Lucia, near Trieste. The beginning of this period bears the name of Hallstattian civilization, from the city of Hallstatt in Salzburg, where archaeologists have found the first iron age very well represented, and anthropologists a population with an elongated skull, which might be of a Nordic type. It was this same type which, according to some authors, spread from Gaul to Palestine and Africa in excursions over three continents. This type seems to have descended—certainly mixed with Alpines—into Italy with the civilization of Villanova, and must have entered in some proportion into the ethnical composition of the "Eternal City." Thus it came about that the three fundamental European races, *H. mediterraneus*, *H. alpinus* and *H. nordicus*, had their representatives among the ancient Romans, although the skeletal remains of the Mediterranean and the Northerners are difficult to distinguish from each other. It is also possible that the Northerners belonged to the aristocrats who preferred to burn their dead. In the calm tenacity and quiet growth of the Roman people perhaps the descendants of *H. nordicus* represented the turbulent restlessness of violent and bold individuals which, even in Roman history, one is able to discern from time to time.

In the eighth to seventh centuries B.C., whilst on the one side of the Apennines the form of the sepulchres and the type of furniture is unchanged, the use of tumulus burials and architectonic tombs with rich furnishings of precious metals, bronze, and terracottas of one or more colours, and with sculptures in stone, is diffused in Etruria: the Etruscan vaults show the astonished visitor a truly Oriental luxury. The symbols there found are also Oriental, neither the alphabet nor the writing seems Italic. All this is accompanied by a perfection in the technique of extracting and working iron and of hammering-out bronze, by a splendour of filigree jewels and by the perfection of the culture of vines and grain. It is a new population; when and whence come?

We must return to the end of the second millennium B.C., to that ethnic turmoil

¹ Sergi, G., "Studi di antropologia laziale," *Bull. R. Accad. med. di Roma*, xxi, 1895, fasc. 1°; Giuffrida-Ruggeri, V., "Elenco del materiale scheletrico preistorico e protostorico del Lazio," *Atti Soc. Rom. Antrop.*, xii, 1906, fasc. 3.

of the so-called "peoples of the sea," who sought other lands, pressed forward and constrained to leave their homes by the Aryan vanguards which came down from the north. It was then that the "Tursha," with other allies, attacked Egypt on their way from their homes in Asia Minor. Their sad experiences and other undertakings which failed must have taught them that in another direction, towards the barbaric regions of the West, and not against the powerful kingdom of the Pharaohs, their attempt might be more successful. So it was that in the eleventh century B.C.—as Professor Montelius believes, and as Sir Arthur Evans and other authoritative archaeologists allow—the Tursha directed their prow to the distant western peninsula, the far-fabled Hesperia, and this time most probably brought their families; still, in Tuscany we see a physical type which is not common to the rest of Italy, a long, thin face, with somewhat wide cheek-bones, especially to be seen among the women.

The Umbrians were vanquished, but not chased away. The skulls taken from Etruscan tombs are numerous and in great majority dolicho-mesaticephalic, that is, of the long Mediterranean type: the remainder, of the Eurasian type, are attributed to the pre-existing and remaining Umbrians, although certainly the Umbrians were not all brachycephals. This mixture of dolichocephals and brachycephals in central Italy has always been maintained; but the question "Who were the Italici?" seems to us perfectly superfluous, as neither the Etruscans nor the Umbrians were the most ancient inhabitants of the country. On the other hand, neither they nor the *terremare*-dwellers, nor the Ligures or others had any conception of Italy, whose name appeared for the first time much later, in a little corner of Calabria. Italy is an historic formation and all the antecedent races who contributed to her making are equally Italian.

But if the name "Italici" is understood in a linguistic sense, then it must refer to the new-comers who spoke an Aryan tongue. Unfortunately it is extremely difficult to recognise the prehistoric Aryan linguistic area: many peoples may have spoken an Aryan tongue who (as happens even now) did not understand each other. If, as it seems from the latest discoveries, the Hittites spoke an Aryan language, as they were in Asia Minor near the original home of the Etruscans, it can no longer be thought impossible that the Etruscans also spoke an Aryan tongue, and because we cannot yet understand their language is not a sufficient reason for classifying the Etruscans as Anaryans definitively and without appeal.

STUDIES IN PRIMITIVE LOOMS.

By H. LING ROTH.

PART IV (CONCLUSION).

7.—THE SOLOMON ISLAND LOOM.

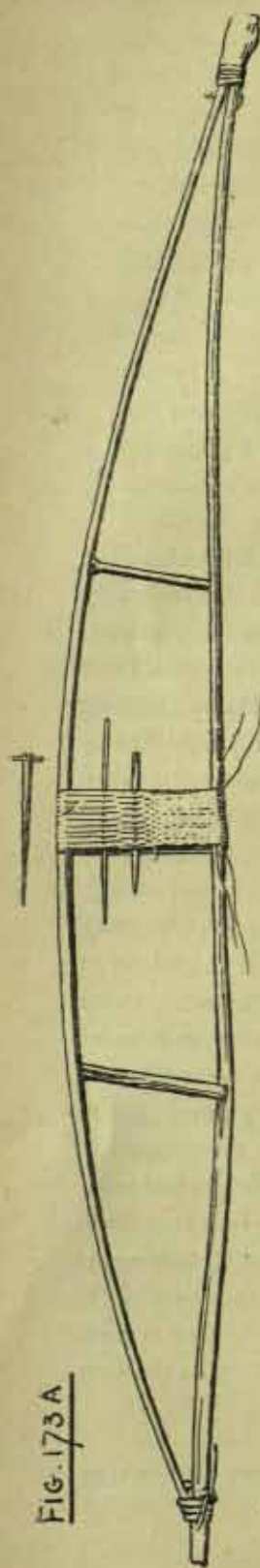
BEFORE discussing the Solomon Island loom, it may be as well to clear the atmosphere by calling attention to an article on an alleged South Sea Loom, by A. Jannasch,¹ who gives an extraordinarily imaginative account of its development. Not understanding this, I wrote to F. von Luschan for enlightenment. He was kind enough to answer under date of 28th November, 1912, stating that, on writing to Jannasch, he only got an evasive reply, that Jannasch was probably mystified by some account of an Homeric or Greek loom, and that Jannasch is not to be taken seriously, and wound up by saying: "Anyhow, I think you need not trouble about his statement; I am sure it is apocryphal, and I rather wonder that it has so long escaped the notice of ethnographers."

The Solomon Island Loom was first described by Curt Danneil in a paper entitled "The Transition from Plaiting to Weaving."² He had found it on the island of Nissan (Sir Charles Hardy group). A similar loom, but from Buka island, exists in the Leiden Museum and there are four specimens, also from Buka, in the Dresden Museum. It is not clear whether the illustrations Danneil gives, reproduced in Figs. 173A and B, are those of the original article, but taking it for granted that he could not have produced such a delicate apparatus, we may accept the drawing as a representation of the native article. The loom is made up of a split piece of wood about 43 inches (or 110 cm.) long, the two halves tied together at the ends to prevent further splitting and kept asunder in the middle by two stays about 3½ to 4 inches (or 8 to 10 cm.) long. A continuous yarn of bast is wound round that part of the frame which lies between the two stays, and this forms the warp; the pick is made in the usual way, apparently by means of the fingers and a needle. To raise the warp

¹ *Verh. Berl. Ges. f. Anthr.*, 1888, xx, pp. 90-91.

² "Der Uebergang vom Flechten zum Weben," *Archives Intern. d'Ethn.*, 1901, xiv, pp. 227-238.

FIG. 173 A



FINE MAT LOOM WITHOUT HEDDLE. NISSAN IS. FROM C. DANNEIL, ARCHIVES INTERN. D'ETHN. XIV. 1901. PL. XIV. LENGTH 110 CM.

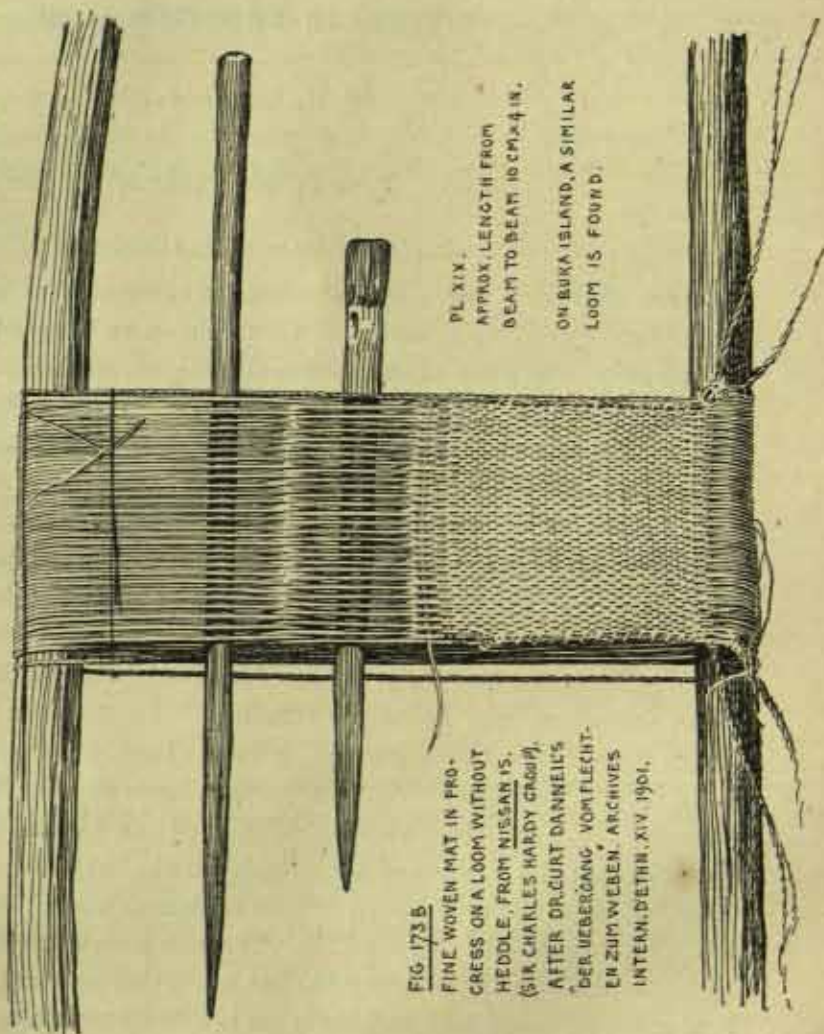


FIG. 173 B

FINE WOVEN MAT IN PRO-
GRESS ON A LOOM WITHOUT
HEDDLE, FROM NISSAN IS.
(SIR CHARLES HARDY GROUP).
AFTER DR. CURT DANNEIL'S
"DER UEBERGANG. VOM FLECHT-
EN ZUM WEBEN. ARCHIVES
INTERN. D'ETHN. XIV. 1901.

PL. XIV.

APPROX. LENGTH FROM
BEAM TO BEAM 10 CM x 4 IN.

ON BUKA ISLAND, A SIMILAR
LOOM IS FOUND.

and make the shed when necessary a pointed piece of wood is used. There is no mention nor indication of any heddle.

Danneil says of this loom :¹ "As it lies before us it represents for all time an original invention—an original transition from plaiting to weaving." He leads up to this claim by pointing out the difference between plaiting and weaving, saying that the first condition of weaving is the laying of the warp with the help of a warping frame (*Spannrahm*) and continues : "It was without doubt the nature of the material which put primitive man on to the idea to 'lay' it and to construct a frame with that end in view. For fineness and want of stiffness made any material useless for free hand plaiting. It being necessary that one portion of the filaments should be 'laid' once over it resulted of itself that another form of intercrossing of the filaments took place. Man already knew the material, either he had used it in making thread or had adopted it in a stiffer form (that is, not split up into such fine slips) for free-hand plaiting. With frame and warp primitive man had discovered the art of weaving, etc., etc." In all this there is no trace of any attempt to show how weaving arose out of plaiting or that it did so.² The connection is a close one, but as I have endeavoured to show later on, plaiting is not in the direct line of the evolution of weaving.

On the other hand, Meyer and Richter³ aver that "this apparatus is no loom at all, as Danneil thinks, but a plaiting frame (*Der Apparat ist kein Webgestell wie er meint, sondern ein Geflechtrahmen*),⁴ which opinion is apparently founded on the fact that it is not supplied with a heddle. But the correctness of the drawing being

¹ *Op cit.*, p. 230.

² This want of demonstration on the part of Danneil in presenting his notion as to how weaving developed out of plaiting is on a par with Julius Lippert's presentation of his notion of the development of the shuttle. "The tedious passing of the weft with the fingers corresponded with the oldest art of sewing. The oldest stone needle was only an awl, with which a hole was made in order to put the thread through with the fingers. The more modern needle is, however, an awl which not only makes the hole but carries through the attached thread. Now in carrying this progress forward from plaiting (*Bandflechten*) to weaving the shuttle developed itself, the shuttle being nothing else than a needle fully specialised for this object. The completion consisting in the fact that it carried with it a lengthened thread wound round lengthwise in the same way as in our modern netting needles." (*Die Kulturgeschichte in einzelnen Hauptstücken*. Part I. Wohnung u. Kleidung, 8vo, Leipzig, 1885, p. 170.)

³ *Op. cit.*, p. 61.

⁴ Writers do not always discriminate in the use of the words weaving and plaiting—*Webererei* and *Flechten*. Buschan, in describing some plain weaving, gives an illustration of a loom on which such weaving is done and calls it a *Flecht-rahmen*, i.e., a plaiting frame. (*Die Anfänge u. Entwicklung der Webererei der Vorzeit*. *Verh. d. Berl. Ges. Anthr.* 1889.) W. H. Holmes, in referring to a pair of sandals which as he says "shows the method of plaiting practised by the ancient inhabitants of Kentucky," goes on to tell us that these sandals are "beautifully woven." Then he illustrates a "similar method of plaiting practised by the Lake Dwellers of Switzerland," and in the legend to the illustration calls it "braiding" (*Rep. Bureau of Ethnology*, 1882 p. 418). The italics are mine. The difference between weaving and plaiting has been explained in

accepted, we have here a frame on which a web can be constructed by means of interlacing of one set of filaments at right angles to another set of filaments with the possibility of the attachment of a heddle, and it is this possibility which helps to confirm the fact that the apparatus, however primitive, is a weaver's loom.

Fine mat work made of delicate coloured strips of bast is one of the characteristic arts of the Solomon Islanders, and we find almost throughout their islands that it is largely in use as decoration for weapons such as spears, clubs, arrows, and also for combs. The work is extremely beautiful and I very much doubt whether it has been surpassed anywhere, and this is especially the case with the ornamental head combs. Some years ago, in describing a few of the native weapons from these islands, I had occasion to remark: "It is curious to note that this matwork apparently all runs parallel with the outlines of the article ornamented, while in most cases in Borneo and wholly so far as I am aware in British Guiana,¹ the pattern is made to run diagonally across the article."² In other words, in the Solomon Islands we have to do with matwork, the basis of weaving, while elsewhere we have to deal with plaitwork. In so far as I can ascertain no one has yet described the method of

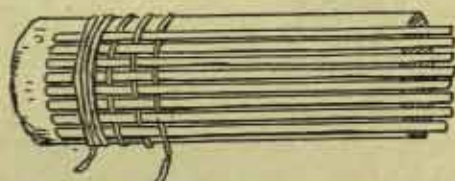


FIG-
174

DIAGRAM TO SHOW POSSIBLE METHOD OF
MAKING SOLOMON ISLAND MATWORK.



FIG-
175

MATWORK DECORATION ON SHARK-
TOOTH SPEAR, KINGSMILL ISLANDS.
KENNEDY COLL. BANKFIELD MUSEUM.

working, nor the seat of the manufacture, which still remains unknown,³ at least, in so far as the beautiful coloured matwork combs are concerned.

An examination of the finished matwork on a flat club from Guadalcanar in

Ancient Egyptian and Greek Looms, p. 36. Similarly many writers speak of a spindle when a spool or bobbin is meant: the explanation may be that the article was once a spindle, but if its use is turned into that of a weft-carrier it is no longer a spindle.

¹ Not wholly so in Brit. Guiana.

² "Spears and Other Articles from the Solomon Islands," *Archives Intern. d'Ethn.*, vi, 1898, pp. 154-61.

³ *Op. cit.*, p. 8.

the Kennedy Collection in Bankfield Museum tends to show that in its manufacture two methods are possible, but by both methods we get cylindrical or tubular or seamless garment weaving. One method is to wind a continuous filament spirally round the club, thus making it into a warp and then passing the other set of filaments at right angles through the warp as in making a pick. The other method is to tie the one end of a series of filaments side by side parallel with the outline lengthwise of the club and then wind a continuous filament spirally round the club in and out of the set of filaments as one would make a pick as indicated in the illustration, Fig. 174, a method which is accomplished in a cruder way in the Kingsmill Islands, as shown in Fig. 175.¹

The same method—tubular weaving or seamless garment weaving²—appears to be followed in making the fine matwork covering of a Uganda child's cylindrical girdle, in making the coarse outer sheath of a British Guiana quiver, in making a small Andaman basket, and so on.³ By this method a club can be covered with matwork from end to end as in this case, Fig. 174, for a length of 28½ inches (or 72·4 cm.). This is where, I think, the Nissan and Buka loom comes in. It comes in as an apparatus for weaving the matwork and has developed as a side issue to the Solomon Island tubular matwork ornamentation, the loom giving us as a product an enlargement of the club matwork with this difference, that what was originally the spiral continuous *weft* has become the spiral continuous *warp*. The loom described by Danneil and illustrated in Figs. 172A and B, is thus of local origin and has arrived at that stage where a heddle⁴ could be applied, but its development is now for ever arrested by the intrusion of the white man. Although it was present in close proximity to the Santa Cruz loom it evidently had nothing whatever to do with that exotic article.

8. A LAPP WOMAN'S BELT LOOM.

This little loom (Figs 176, 177, 178) comes from the River Tana, Finmark, Norway, and is now in the Victoria and Albert Museum. The interesting point about the loom is the secondary heddle arrangement for weaving the floating pattern by means of the warp, a method rare in primitive looms, but of course common enough

¹ In Bankfield Museum there is a gourd stopper similarly decorated, obtained in New Guinea about 1886 by my brother, Dr. F. Norman-Roth, which Dr. Haddon assigns to the Massim District.

² M. D. C. Crawford (*Peruvian Textiles, Anthropol. Papers Amer. Mus. Nat. Hist.*, Vol. xii, Part iii, New York, 1915, p. 95) says of tubular weaving that it "seems the most unlikely for the primitive craftsman to stumble upon," but here we have it in almost its very first stages among a very savage but artistic people.

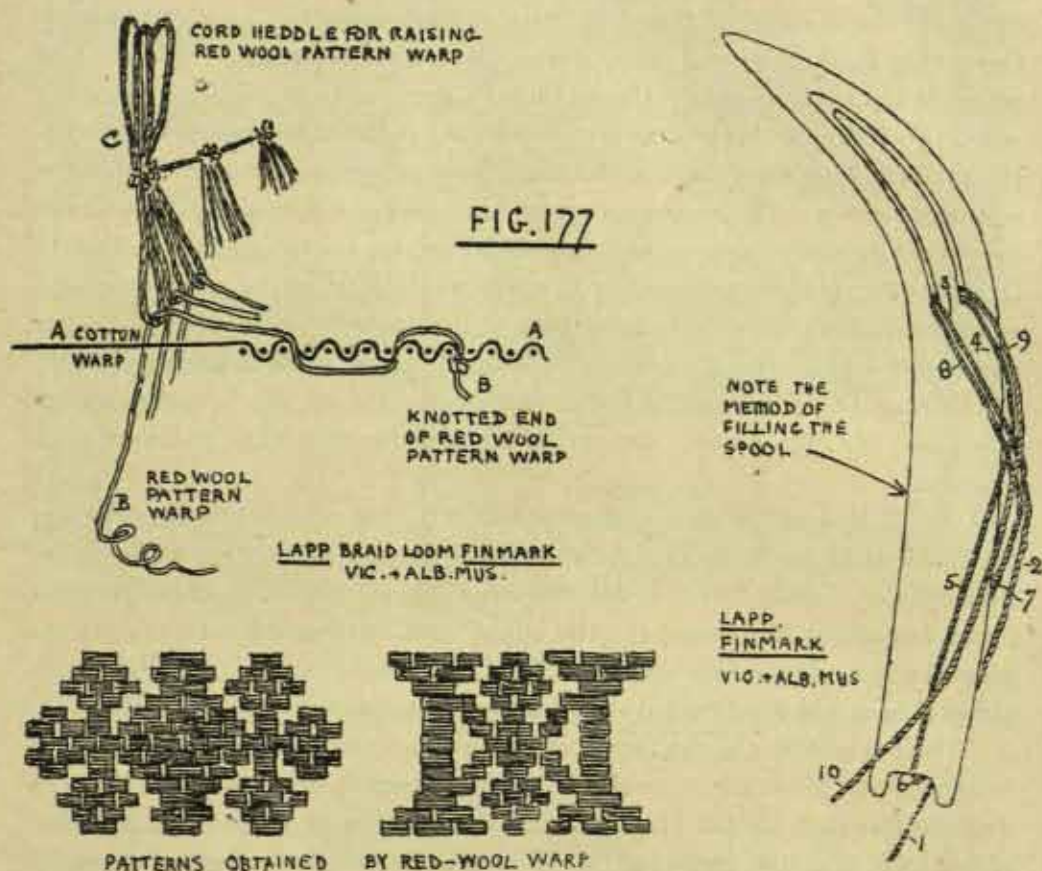
³ The examples quoted and others can be seen in Bankfield Museum.

in our manufactures. The length of warp as illustrated is 57 inches (or 145 cm.), and the width of the web is $1\frac{1}{2}$ inch (or 4 cm.). The number of warp is 55 to the inch (or 22 to the cm.), and the number of picks to the inch is 22.5 (or 9 to the cm.).

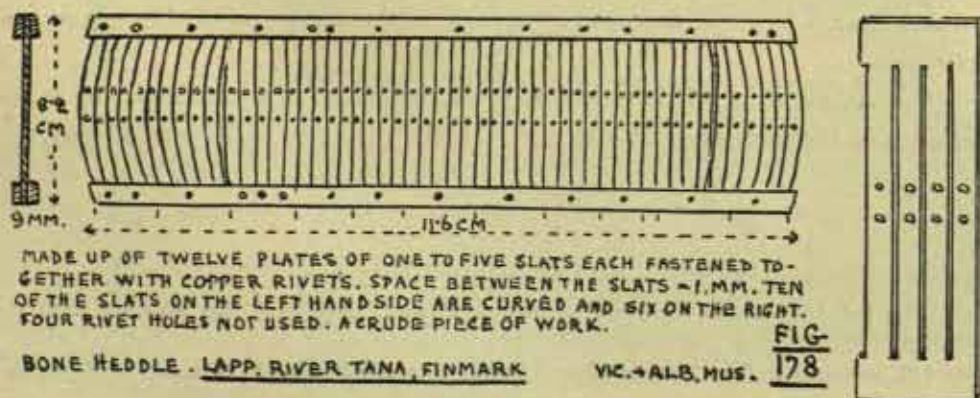


It consists of eighty-eight warp threads, which are laid through a free rigid bone heddle, forty-four passing through the slots in the heddle and forty-four passing through small holes in the bars of the same, the shed being made by alternately

raising and lowering the bone heddle. When the heddle is lowered or raised the warp threads passing through the holes are those which get lowered or raised, at the



same time the threads passing through the slots practically remaining stationary. The movement is quite simple.



To obtain the pattern in this case, gotten by means of red spun wool, a series of eighty-seven red threads of equal length to the cotton warp are knotted under the warp at the breast beam end (Fig. 176B), and as soon as the three or four picks have been made, every red thread is drawn upwards separately between the warp threads until the knot stops its progress. Then, say, as a start, a couple of picks are made and the loose ends of the red thread brought down between and below the warp. To facilitate this process a very primitive cord heddle is brought into use (Figs. 176C, 177C), every leash of which holds one red thread just as with ordinary primitive heddles. The leashes are bunched in threes and tied together at requisite intervals with special loops at each end of the row, apparently intended to be used for raising the red threads altogether. In working, every leash will be raised separately, or in threes, and, when the pick has been made, the red threads are pulled down underneath separately by the fingers. Naturally as the work progresses the cord heddle must be pushed further and further away. The pattern is worked on the wrong side, i.e., the pattern appears on the under surface while the work is in progress.

Otis T. Mason¹ has given us descriptions of the free rigid heddle in use among the Pueblo and other Indians and the white population of the United States, Germany, Finland, etc. In the Pueblo heddle the cross bars are tied on to the rectangular frame, but among Europeans, and also in Indonesia, the frame is carved out of one piece of wood. In the Lapp specimen (Fig. 178) the cross bars are cut out of twelve pieces of bone which are riveted on to a top and bottom bar.

There is no frame to the Lapp loom, otherwise apart from the warp pattern it belongs to the Norwegian type of belt loom in Bankfield Museum (Fig. 179), with a similar free rigid heddle. In the English eighteenth to nineteenth century ladies' ribbon loom (Fig. 180), instead of the rigid heddle being free it is fixed at the end of its frame box, and hence, as it cannot be raised or lowered to make the shed, the warp has to be raised and lowered instead; but in this case the warp passing through the holes will remain stationary while the warp passing through the slots gets moved up and down. The same procedure is followed in the use of the rigid heddle when it stands by itself, as it still apparently exists in some parts of Germany and Indonesia.²

Specialisation in primitive looms, as in the above, is not uncommon, as we shall see in the next chapter.

¹ "A Primitive Frame for Weaving Narrow Fabrics," *Rep. U. S. Nat. Museum*, 1899, pp. 487-510.

² R. Stettiner: *Das Webbild in der Manesse Handschrift*, Berlin, 1911, p. 7; Meyer und Richter, *op. cit.*, Pl. II

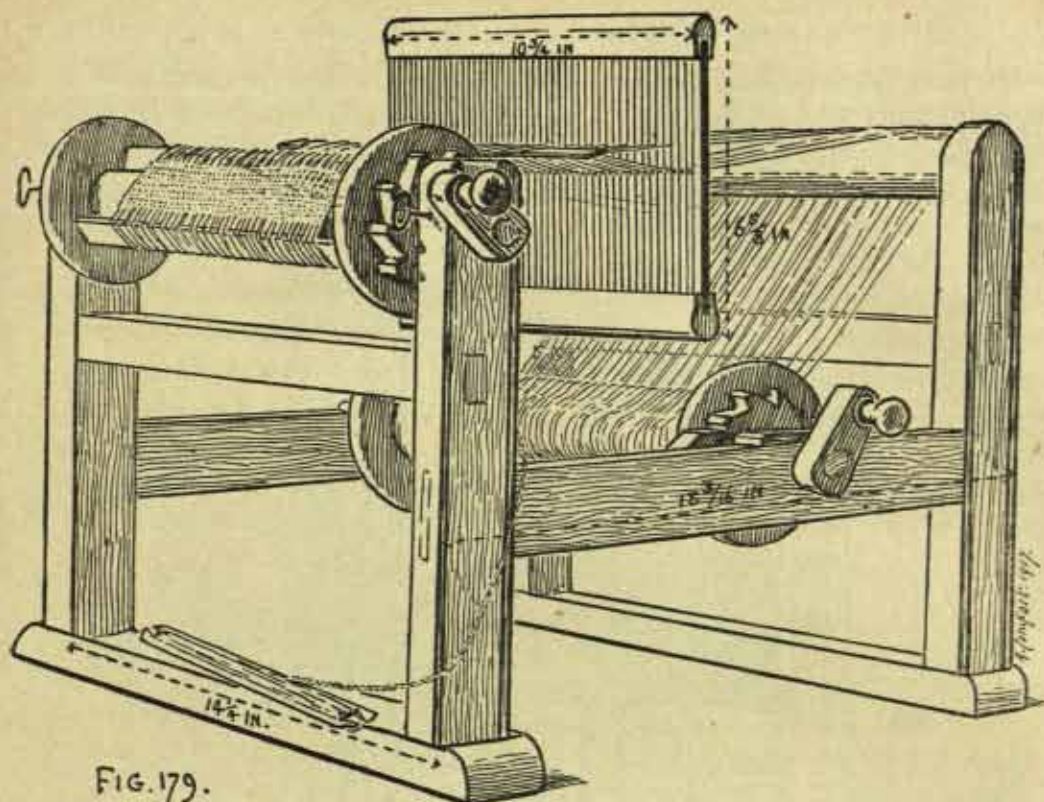


FIG. 179.

XXTH. CENTURY NORWEGIAN LOOM WITH FREE RIGID HEDDLE, BANKFIELD MUS.

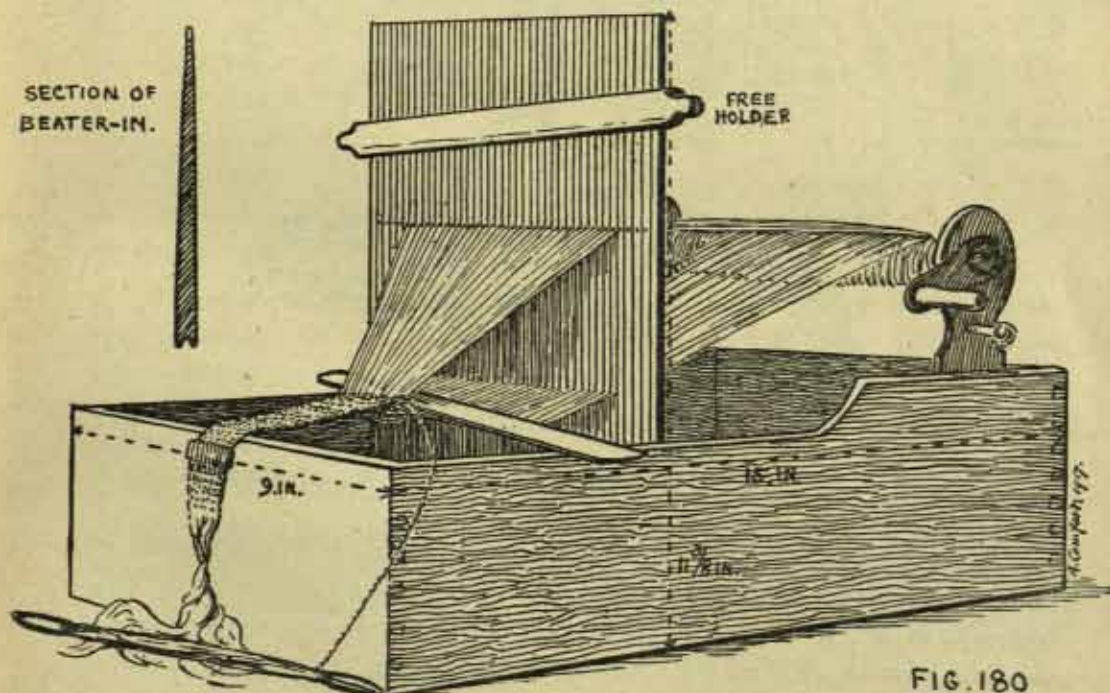
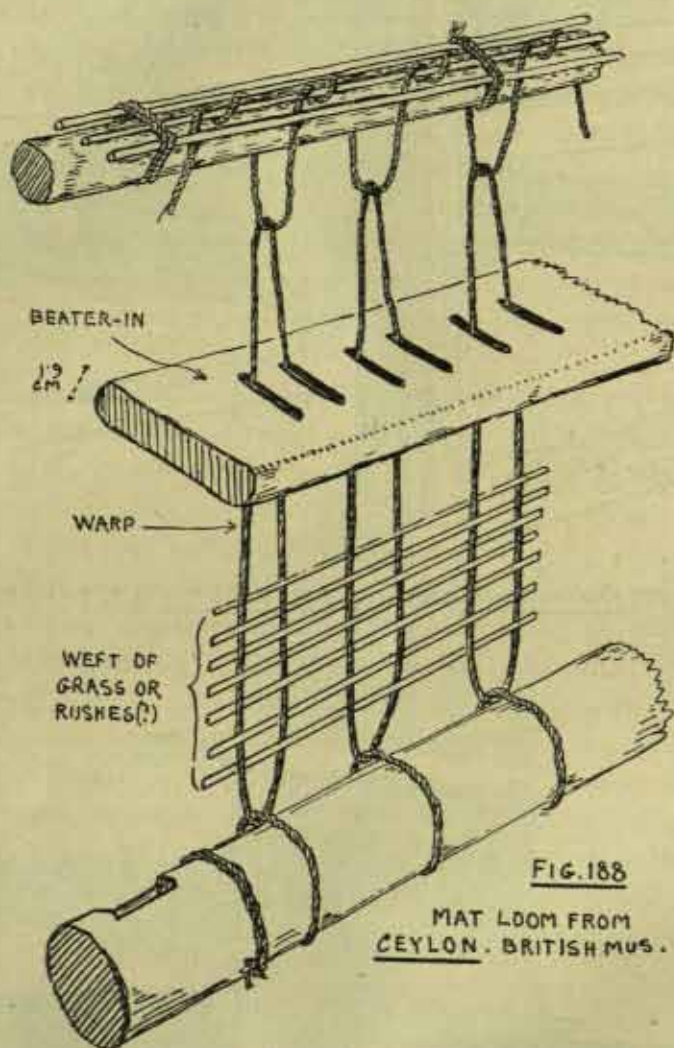


FIG. 180

LATE XVIII TH. CENTURY ENGLISH LOOM WITH FIXED RIGID HEDDLE, BANKFIELD MUS.

9. ORIENTAL VERTICAL MAT LOOMS.

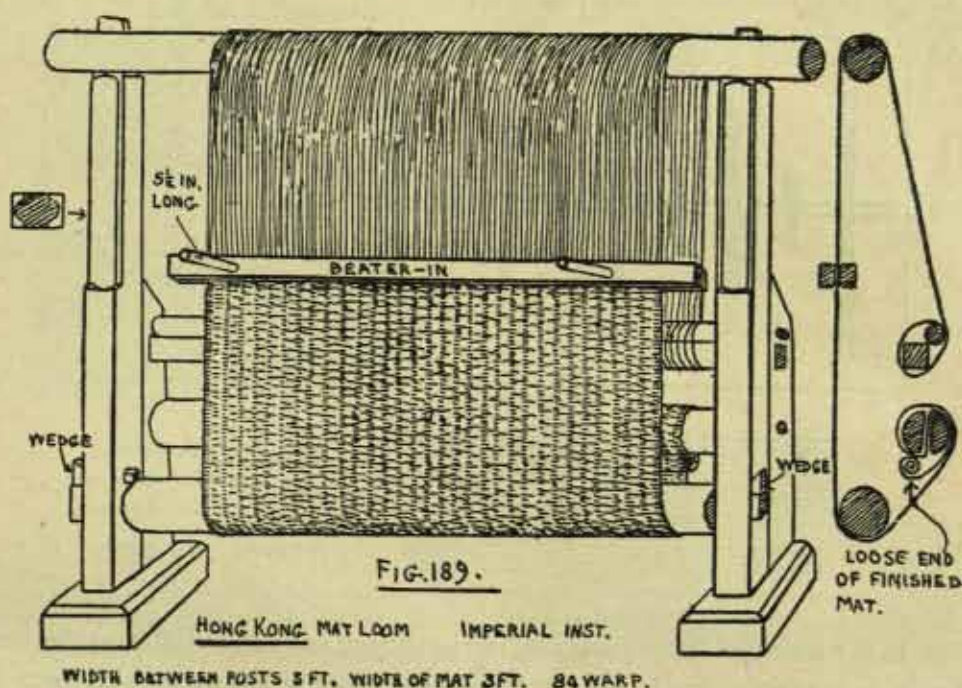
The Upright Oriental mat looms on which large and thick floor mats are made are of special interest because of the peculiar development of the beater-in, which consists of a heavy bar of wood with transverse slots for the warp threads to pass through. This development appears to be due to the springy nature of the material,



straw, rushes, thick grass, etc., of which the weft is composed which requires something heavy to hold it in position as the work proceeds.

In the specimen of the Ceylon mat loom (Fig. 188) in the British Museum, the beater-in is made out of one solid piece of wood of the following dimensions, $37 \times 3 \times \frac{3}{4}$ inches (or $94 \times 7.6 \times 1.9$ cm.). There are 112 slots for the warp to pass through; the slots begin at a distance of about $2\frac{3}{8}$ inches (or 6 cm.) from each end and are

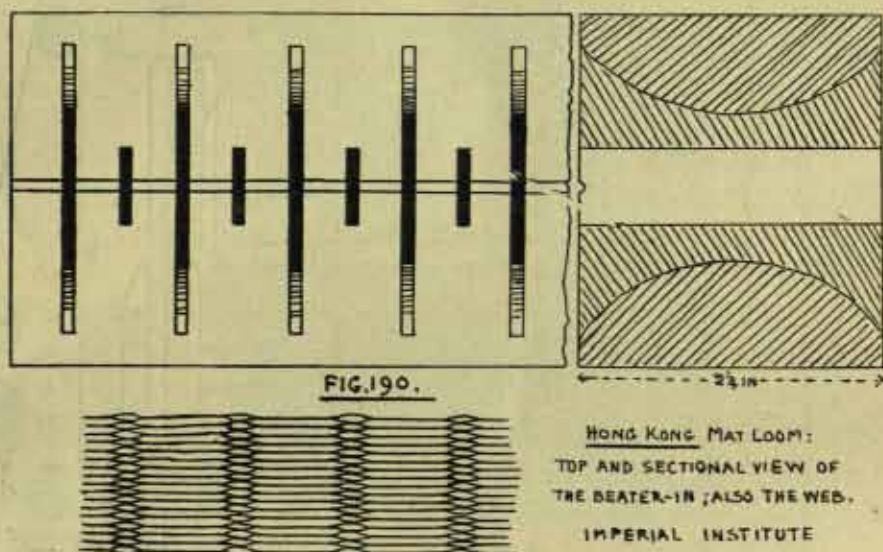
approximately $\frac{5}{8}$ inch (or 71 mm.) apart. In the specimen from Hong-kong (Fig. 189), at the Imperial Institute, the beater-in is more massive, to correspond with the heavy elaborate frame and thicker weft used, and is provided with special handles $5\frac{1}{2}$ inches (or 14 cm.) long; the slots alternate in two lengths, the object of the longer ones is to allow more play and so obtain alternate long and short weft surface, as shown in Fig. 190. The action is clear enough and I am unable to follow Otis Mason when he says "the Chinese have a large block of wood with saw cuts inclined so as to throw the warp up and down in weaving the Canton matting,"¹ but there is no throwing the warp up and down, for it consists of rigid, strong yarn, as in ordinary looms. In this Hong-kong mat loom there are eighty-four warp threads in a mat-width of three feet.



The mats obtained on both of these looms are true weaves and differ, therefore, from those made on the vertical mat-making frame of the Ainu. This consists of a ground beam and an upper beam supported by two uprights, the whole having the appearance of a rectangular frame, stood upright, resting on the ground-beam side. Two threads are fixed at intervals on the ground-beam opposite each other; these threads are somewhat longer than the intended length of the mat and have each a stone fastened at the loose end. The work begins by placing rushes along the ground-beam between the opposing threads, raising these threads over the rushes, twisting them half round each other and then throwing them over the upper beam so that

¹ *Origins of Inventions*, London, 1895, p. 247.

one thread end with its stone hangs over one side and one thread end with its stone over the other. Then a second row of rushes is laid on top of the first row between the opposing threads and as before the threads are twisted over them and thrown over the upper bar, and so on—the twist always being made in the same direction. As the work proceeds and the mat is completed as far as the upper beam, it is rolled round the ground-beam, leaving a similar clear space as there was at first between the last or top row of rushes and upper beam to allow the work to be continued. By lengthening the threads the mat can be made of almost any length. Hitchcock's verbal description¹ not appearing, to me at least, as sufficiently explanatory, I had a frame made at Bankfield Museum according to the illustration he supplies us with, and have taken the above description from the actual working on this model.



In the Ainu mat frame the laying of the warp, if one can so call it, as the work proceeds is again probably due to the springy nature of the weft, which seems to require something more than mere interlacing to be kept in position. This something more is attained by twisting the warp threads after every piece of rush weft has been placed in position. With this method no beater-in is required. The loom and frame give a somewhat striking example of achieving the same result by different means. The Ainu frame appears to be the more primitive of the two and has differentiated at an earlier stage, but the mat-loom has probably an origin closely allied to that of the upright looms met with elsewhere. To get at the bottom of this we must hark back a bit.

¹ *Op. cit.*, p. 463.

10. SOME VERTICAL LOOMS.

In the Vatican library there exists an illustrated MS. book of Virgil's *Aeneid*, of which photographic reproductions¹ have been made and distributed to various libraries in different parts of the world. The original is generally considered to be a production of about the fourth century A.D. On Fol. 38, *Pictura* 39 gives a representation of the magic doings of Kirke and on the upper right-hand corner there is depicted a wooden structure (Fig. 191), which may be likened to a vertical loom. It consists of two uprights on feet connected by three equidistant horizontal bars with an irregular clear patch just above the lowest bar. The middle bar probably

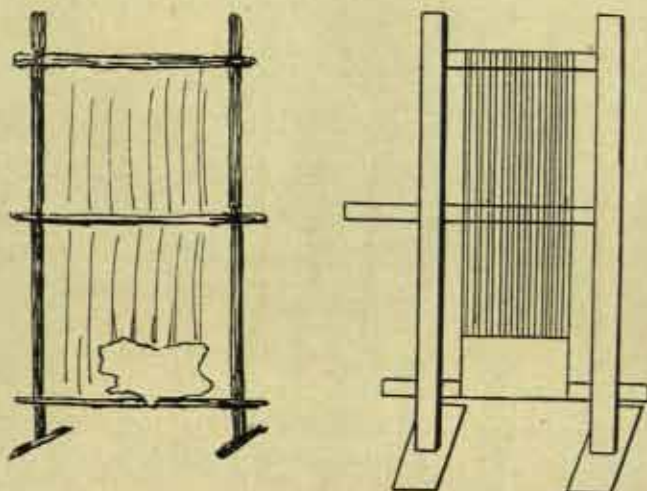


FIG. 191.

THE VIRGIL LOOM ACCORDING TO:—

FRAGMENTA ET PICTURAE
CODICIS VATICANI, 3225.
.... ROMAE, 1899. PICT. 39.
FULS8

ANTIQUISSIMI VIRGILIANI
CODICIS FRAGMENTA ET PICT-
URAE EX BIBLIOTHECA VATIC-
ANA. ROMAE C1910CCXLI. P 129.

represents the heddle rod. The drawing of the structure is only about 24 mm. high, and this minuteness, together with the wear and tear of ages and the final photographic reprint, make it by no means a clear representation. A female figure (Kirke) standing to the left of the loom is depicted with her right hand on the junction of the heddle rod and upright post; her left hand is probably also on the post lower down but not clearly shown. In neither hand does she appear to hold anything. Johannes Braunius² gave a very much larger illustration of this loom with the female on the right hand holding a wand in her right hand and showing a large

¹ *Fragmenta et Picturae Vergiliana Codicis Vaticani* 3225. Romae, 1899.

² *Vestibus Sacerdotum Hebraeorum*, 1680.

rectangular piece of cloth at the bottom of the loom. For a representation of this piece of cloth there is little warranty—for it is difficult at the present day to be certain what the white blotch was intended to represent in the original *pictura*. However, the Vatican published in 1741 an edition of the above-named copy of Virgil,¹ and in this Kirke and her loom are illustrated fairly distinctly, though on the same minute scale as the original (*see* Fig. 191). She is depicted not quite as in the original with her right hand on the heddle rod extension, while the left hand is not shown at all. In the meanwhile B. de Montfaucon² published a reverse of the illustration of the loom as it appears in Braunius, showing Kirke on the left again. Johannis Ciampini³ follows Montfaucon almost to a line. Since then the illustration has been fancifully and thoughtlessly copied times out of number. But we have to come back to the point that this illustration probably represents a fourth century A.D. upright loom, in which the warp weights have already been replaced by a breast or cloth beam and the weaving begins from the bottom and not from the top. It is, in fact, an earlier form of the upright loom as we meet with it in the East, between Asia Minor and India, and also in Africa at the present day. Yates and Marindin⁴ consider the making the web to begin at the bottom as an anachronism, that is if we consider the period of Æneid's travels, but it really represents the artist's limited local knowledge of a loom in his days.

The loom referred to by Yates and Marindin is the well-known warp-weighted loom, a highly specialised form of which was depicted by Johannes Braunius, above referred to, over two hundred years ago (*see* Fig. 192). Both Bluemner and Marquardt condemn this as a piece of fiction, but give no reason for doing so. I have submitted the illustration to several practical weavers, and their opinion is that the working is quite feasible and to anyone who takes the trouble to examine the details of the illustration the feasibility quickly becomes manifest. Montfaucon, in copying Braunius, gives an incorrect version of it and Johannes Ciampini has again apparently used Montfaucon's plate, reproducing the same mistakes both in essentials and in details. It has been re-illustrated many times until it has reached its final stage of degradation in an extraordinary work by Perry Walton.⁵

¹ *Antiquissimi Virgilium Codicis Fragmenta et Picturae ex Bibliotheca Vaticani*, p. 129.

² *L'Antiquité Expliquée*. Paris, 1719, Part iii., Pl. 195.

³ *Romani Vetera Monumenta*, Romæ, 1747, Pl. 35.

⁴ *Smith's Dictionary of Greek and Roman Antiquities*, 3rd Ed., 1890.

⁵ *The Story of the Textiles*, Boston, Mass., 1912. The adjective "extraordinary" has not been used inadvisedly. What is one to think of such statements as the following: "Fabrics dating back to a period thousands of years ago have been unearthed in England (p. 14)." "On the walls of Nineveh, Babylon, Thebes, and the ancient cities of Peru and Mexico, throughout most of the ruins of Assyria, Persia, Egypt, and among similar ruins of both North and South America, is depicted the whole process of the textile industry, from the raising of the sheep or growing of the flax to the spinning of the yarn and weaving of the fabrics" (p. 16).

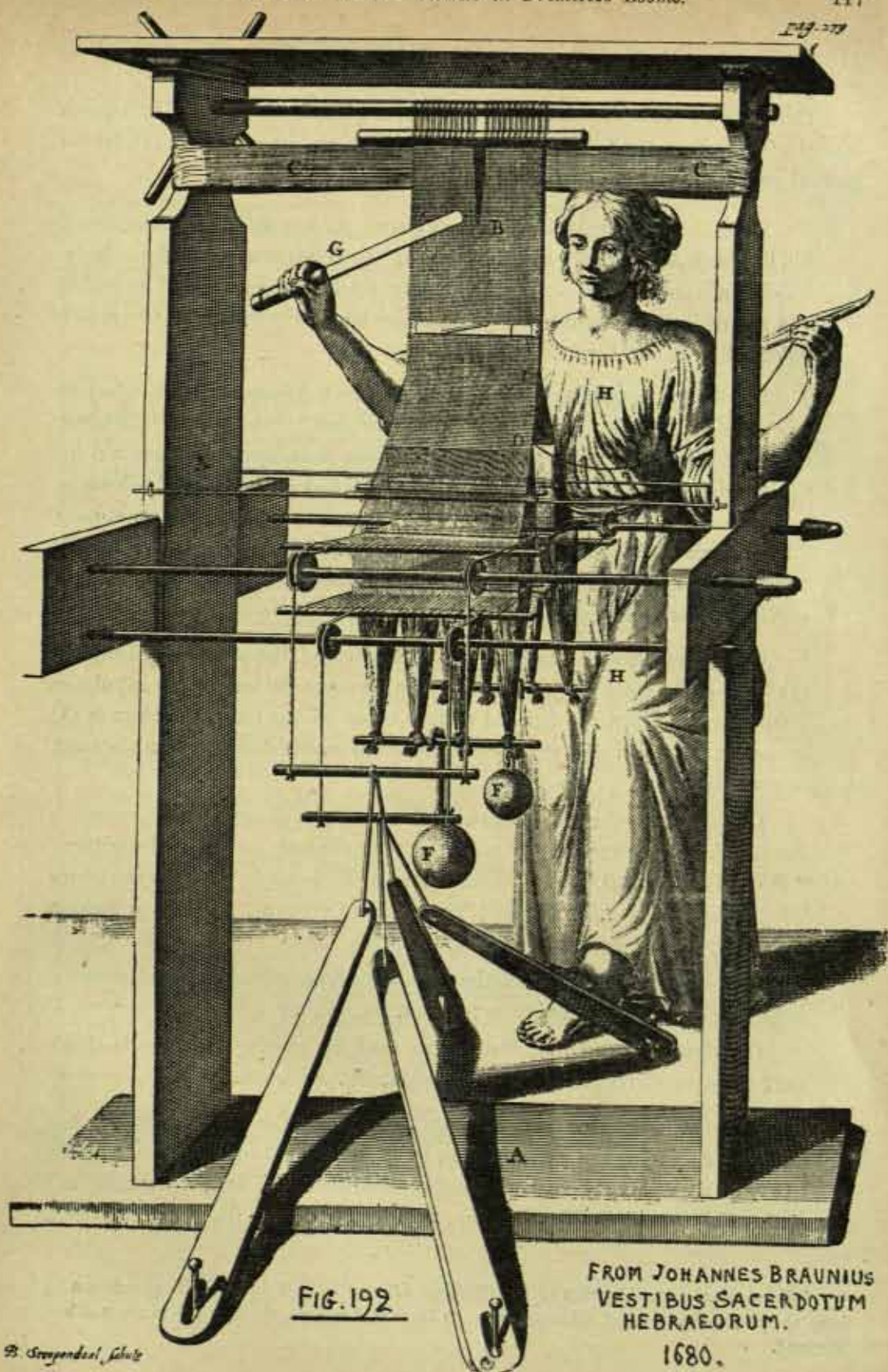


FIG. 192

FROM JOHANNES BRAUNIUS
VESTIBUS SACERDOTUM
HEBRAEORUM.

1680.

B. Gropendael, sculp.

The following is the description of this loom as given by Braunius. It is worth reproducing, quite apart from the rarity of the book and its inaccessibility to the general public and even to students.¹

AAAA.—Loom, or ancient weaver's beam. An *upright* loom (Artemidorus, Bk. iii, Chap. 36). Perhaps called "jugum" by Ovid on account of its shape, which is not unlike a yoke. In what manner a yoke was constructed, and what was meant by "sent under the yoke," may be clearly seen from Cicero, *De Officiis*, Bk. iii, and Livius, Bk. iii, etc.

B.—Shirt, rounded and closed without seam; "seamless" (*ἄραφος*) as was the shirt of Christ (John, chap. xix). Otherwise "tunica recta." (Isidorus, Orig. Bk. xix, chap. xxii). This shirt is woven in an upward direction; for the weaving begins from the topmost thread CC and gradually works down to D. (Herod., Bk. ii, Theophylactus "In Johannem," Festus Chrysostomus "In Johannem Homil." lxxxv. Isidorus Pelusiota, Epist. lxxiv, Bk. i). The shirt is rounded and closed from B to I; then, however, it is divided to D and E, as men's undergarments usually are to-day.

CC.—Threads, which are part of the weft (trama), but so prolonged beyond the body of the shirt that at last they can be made the warp (stamen) of the shirt-sleeves. When the finished shirt is taken off the loom, the threads CC are cut at the ends; they are afterwards turned in, and finished off in the same way as BD.

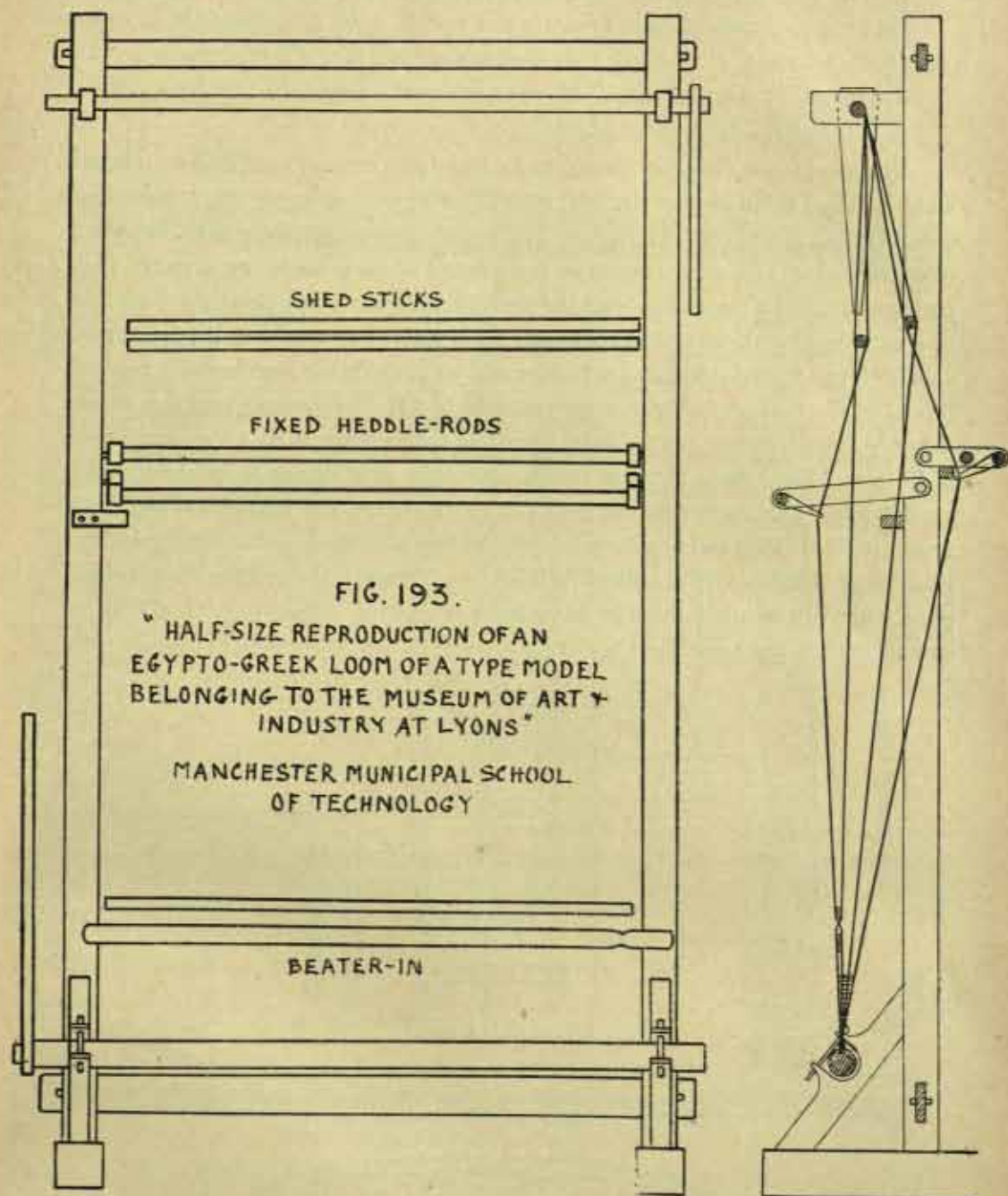
DE.—Two warp-threads, of which D is the anterior, and E the posterior; they are joined by one and the same thread to the weft, and plaited together: "ὅθ' ῥάκη συμβάλλειν," "duos pannos committere." (Chrysostomus "In Johannem Homil." lxxxv; Theophanes Cerameus, "Homil. in Passion Domin." xxvii. Josephus, Bk. iii, chap. 8).

FF.—Weights with which the warp threads in this manner of weaving were weighted (Seneca, Epist. xc; Pollux, Bk. vii, x.)

G.—Spatha, *σπάθη*, an instrument used for keeping the threads of the weft together (Seneca, Epist. xc; Pollux, Bk. vii, chap. x).

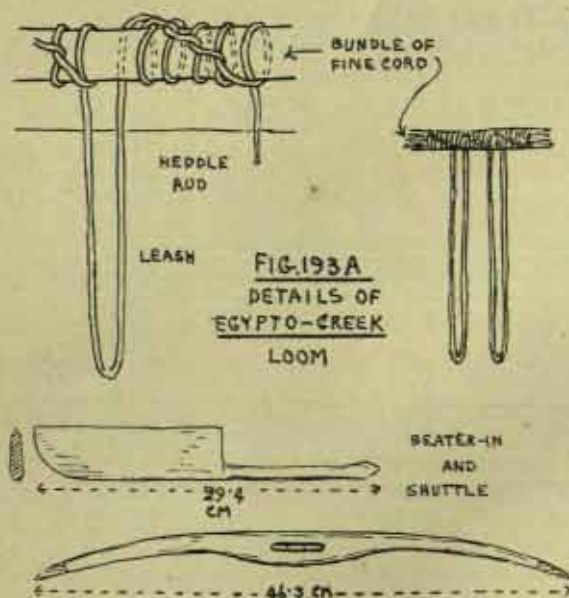
H.—The woman-weaver, holding the spatha in her right hand for the purpose of bringing the weft together, by pushing the threads upward; in the left hand she holds the weaver's shuttle. Moreover, she weaves standing, not sitting (Isidorus, Orig. Bk. xix, chap. xxii. Servius Aen., Bk. vii; Eustathius,

¹ For instance, the librarian of the Chetham Library refused to grant me permission to have the plate photographed, although the copy there is, I believe, the only one in the north of England.



"Ad Homer Odys.," Bk. v; Hesiod, "Ergon"; Artemidorus, Bk. iii, xxxvi). As she weaves she walks round in a circle; for when she has passed the shuttle or weft through the web or threads D, she has to go round the whole loom, so that she may pass the same shuttle and weft through the threads E, in order that the webs D and E may be woven together (Theophylactus, "In Johannem"; Virgil, "Aen.," Bk. vii; Isidorus, "Orig." Bk. xix, chap. xxiv; Artemidorus, Bk. iii, chap. xxxvi).¹

The loom is one designed for making a seamless garment, and in fact produces what is called tubular weaving. That it has not survived is no doubt due to its complicated nature, coupled with the warp weight system. It remains, however, of considerable interest, inasmuch as the method of warp weighting depicted may perhaps indicate a transition from the use of simple warp weights to the adoption of a warp beam. Before proceeding further it may be as well to call attention to another form of tubular weaving as illustrated by a model in the Manchester Municipal School of Technology, of which the label reads "Half Size Reproduction of an Egypto-Greek Loom of a type model belonging to the Museum of Art and Industry of Lyons." The Textile Department cannot tell me anything as to its history, and owing to the War I am unable to obtain particulars. The accompanying illustrations (Figs. 193, A and B) will explain its details and at the same time indicate that it partakes of the nature of a fixed heddle loom (although the heddles are not completely fixed) somewhat like the Aures loom (Fig. 91B), which may, to a limited extent, explain the name Egypto-Greek.



¹ For assistance in the translation of this description I am much indebted to my friend, Lieut. Arthur Redford, late Bradford scholar, Manchester University.

Reference has been made above to the upright looms found in Asia Minor, etc., which, like the upright looms in North Africa, are in all probability the immediate successors of the ancient warp-weighted loom. A few remarks on two of such looms may not be out of place.

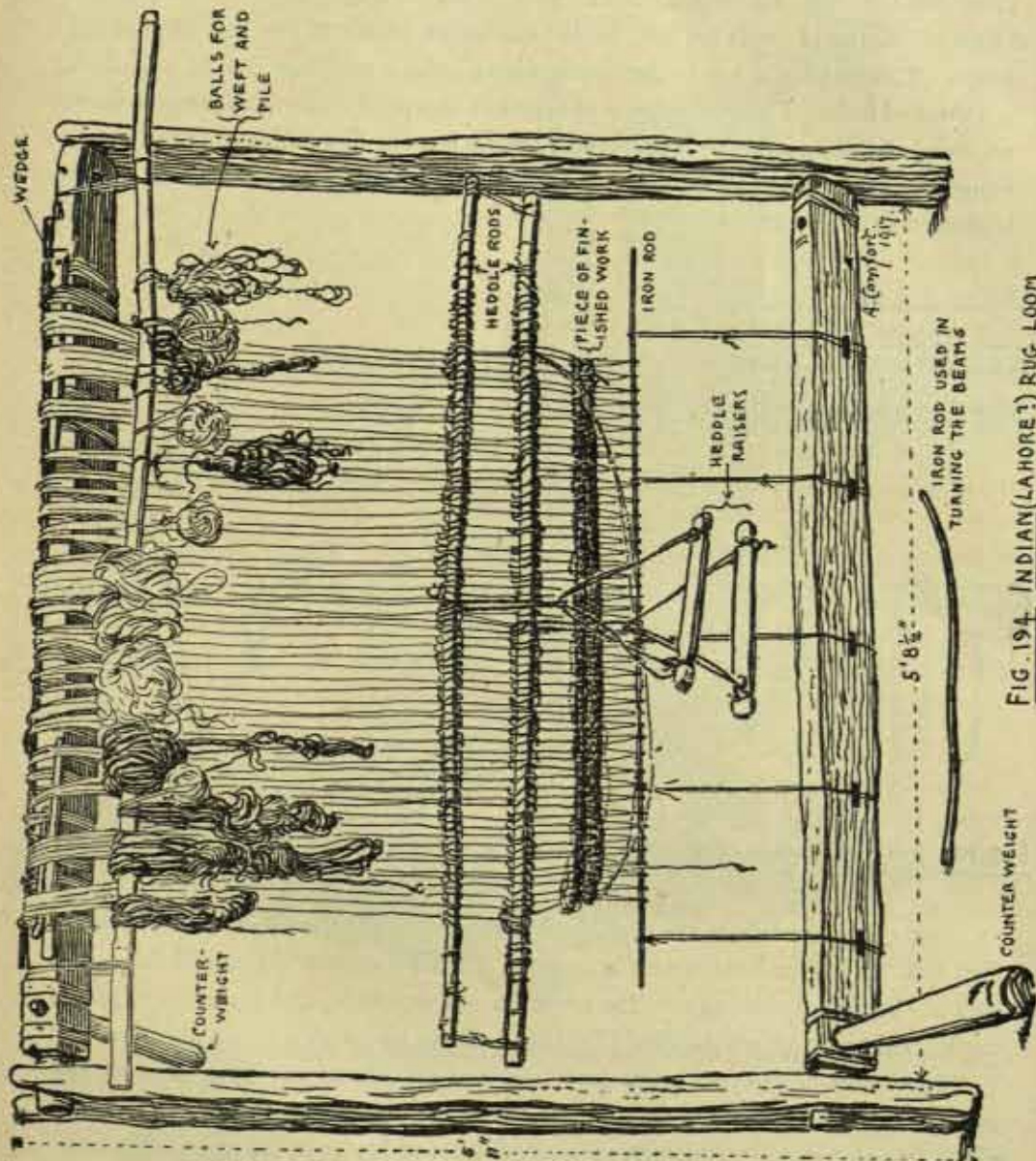


FIG. 194. INDIAN (LAHORE?) RUG LOOM.
BANKFIELD MUSEUM.

The Bankfield specimen, said to come from Lahore, is depicted in Fig. 194. It is a rug loom, 71 inches (or 1·8 m.) high by 67 inches (or 1·7 m.) between the uprights. To a certain extent the warp is kept taut by means of heavy timber levers or counterweights as shown, the lower one of which, when in use, was apparently

tied down to the ground. To increase the tautness, but only in a very inefficient way, wedges are driven into the coils of warp on the upper beam. On a bambu rod placed across the loom are hung variously coloured balls, with which to make the pile and weft, the threads being pulled out as required by the worker. At the lower end the warp is attached to an iron rod, which in turn is attached to the lower beam by means of cords let into small rectangular holes cut into one edge of the beam. The heddles are provided with raisers. For every one row of pile there are three of weft. The pile ends are cut level by means of a pair of shears which are provided with special lugs to keep them level when the loose ends of the pile are being trimmed. The picks are driven home by means of a bent iron beater-in. It is altogether a very crude loom.

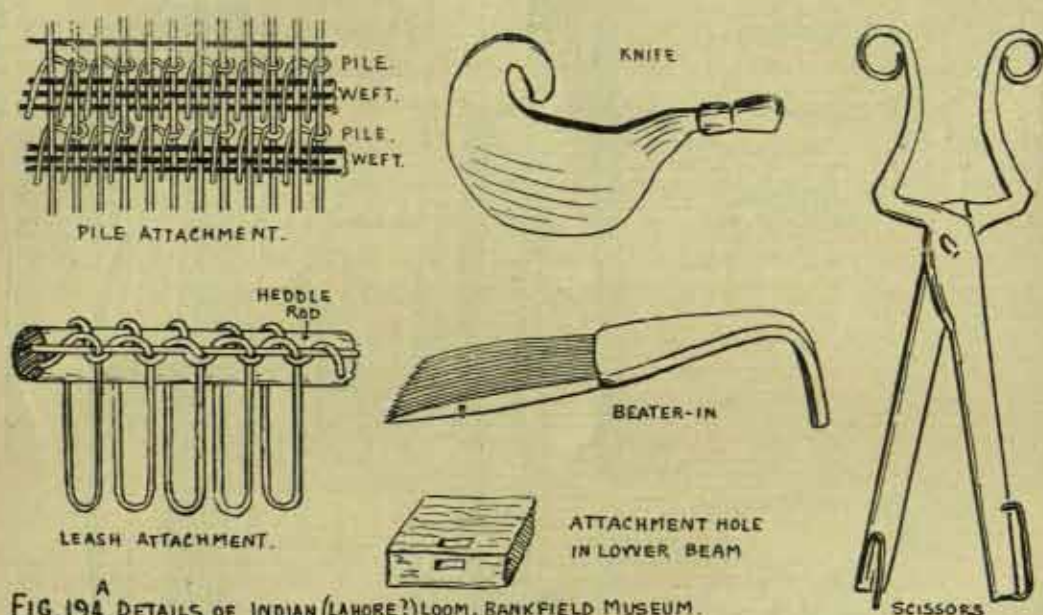


FIG. 194^A DETAILS OF INDIAN (LAHORE?) LOOM. BANKFIELD MUSEUM.

But quite as crude is the rug loom illustrated by O. Benndorf,¹ reproduced in Fig. 195. Here the lower beam is fastened down by a cross bar passed through a hole at the end of the beam. The beater-in is very crude, and is similar to one in the Victoria and Albert Museum (Fig 195A) said to be Persian.

The frame of the two looms just described consists of two upright posts and two cross pieces which join the uprights at top and bottom respectively. The frame of the Oriental mat loom with its specially developed beater-in belongs to this form. In the warp-weighted loom there is only one cross piece which joins the uprights at the top. As incidentally mentioned when discussing Braunius' loom, there is an indication of a transition between these two looms, which consists in bunching the

¹ *Reisen in Lykien u. Karien*, 1884, p. 18.

lower warp ends to a loose rod, on to which one weight only is attached, which keeps all the threads taut. But there must have been an earlier or simpler frame than that of the warp-weighted loom. An example of this is the Kwakiutl loom, figured by



Fig. 13. Türkin am Webstuhl

FIG. 195. FROM O. BENNDORF'S REISEN IN LYKIEN U. KARIEN. 1884.

Mary L. Kissell,¹ or the Ojibway loom figured by M. D. C. Crawford.² It consists of two uprights stuck into the ground about 2 feet apart and joined at the top by a piece of yarn, or perhaps originally sinew. The weaving naturally proceeds

¹ *Aboriginal American Weaving*, Nat. Assoc. Cotton Manufacturers, Boston, Mass., 1910, p. 4, Fig. 1.

² *Amer. Museum Journ.*, Oct., 1916, p. 382.

downwards. On the Ojibway loom the cloth is apparently made in one piece. On the Kwakiutl loom the weaving is done at twice, that is to say, the cloth is woven for the full length of one half of the warp and then the weaving continues or rather recommences on the top of the second half, and the two finished pieces are laced together at the adjoining edges. On the well-known Chilcat loom¹ the cloth is woven in several strips, instead of two only, and then joined up.

Besides the Kwakiutl loom, Miss Kissel illustrates² a similar frame to the above, but with a wooden cross-piece at top, instead of a piece of string, on which mats are *plaited*. In Bankfield Museum there is a piece of plaited work of bison hair yarn given me several years ago by Miss M. A. Owen,³ which has apparently been made on such a frame in narrow strips which have been laced together, and I have had a facsimile piece of plaitwork made on such a frame. In the Pitt-Rivers Collection, Oxford, there is a larger piece of the bison hair plaitwork which, until one examined the selvedge, has the appearance of diagonal weaving! Advocates of the theory that weaving was evolved from plaiting would no doubt consider that these examples of primitive frames, so identical in construction on which both plaiting and weaving can be done, supports their theory. Both plaiting and weaving require some sort of simple framework support, so there is nothing in the coincidence. The presence of two sets of elements in weaving does not necessarily mean an advance over the one set of elements in plaiting. The initial step in plaiting, the selvedge, which is a *sine qua non* of plaiting, is a secondary matter in primitive weaving and has, as it were, to be undone or dropped or ignored if we are going to weave; this would be a retrogressive step and places plaiting in the position of a side product rather than in the direct line of the evolution of weaving.

11. THE ALLEGED "WEAVER'S COMB."⁴

In Figs. 181 and 182, outline illustrations are given of two of these tools now in the British Museum; the larger one was found at Mortlake on Thames and the

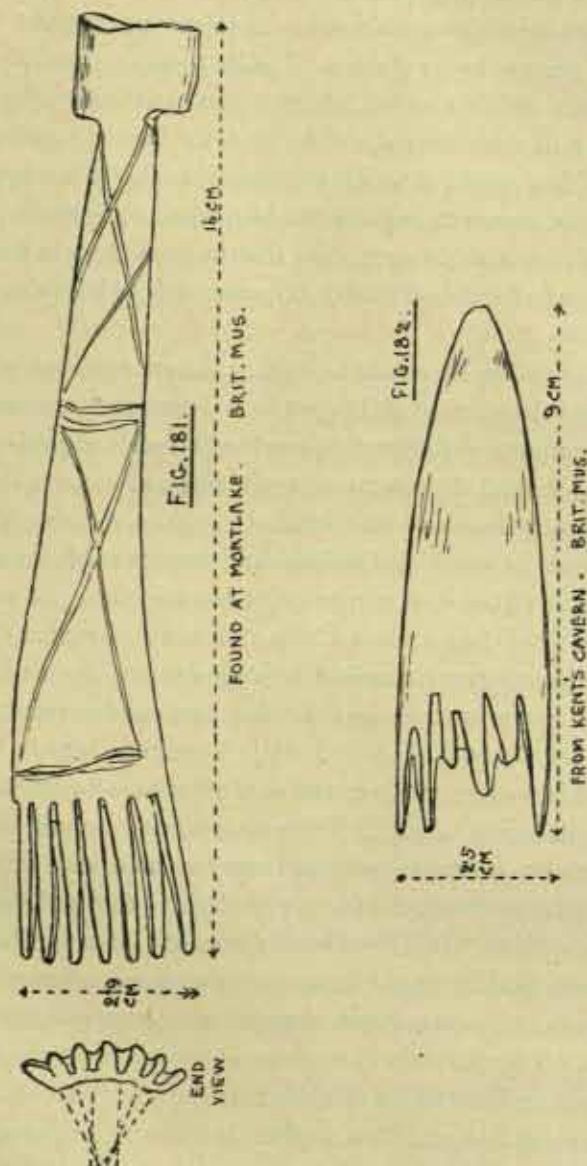
¹ Emmons, *op. cit.*, p. 343.

² *Op. cit.*, p. 6.

³ Author of "The Folklore of the Musquakie Indians," *Folklore Society's Journal*, 1904.

⁴ Even if the Glastonbury and other similar tools were intended for beating-in the weft, and this is what is claimed as their function, it is a misnomer to call them "weavers' combs." The name comb implies an instrument for straightening or separating out any more or less tangled fibres by drawing it through the entanglement. In driving home the weft the action is not that of combing, but of a decided tapping or pressing down—there is no separating or straightening out of fibres, for this is not wanted, or if it were wanted it would be exceptional. When A. Barlow (*History of Weaving*, Lond. 1878, p. 58) wrote: "It is far from being uncommon for weavers at the present day to use a comb, especially when they have a sticky warp to weave, or a warp that, owing to the felting property of the material, requires to be separated frequently," he was dealing with exceptional circumstances. A more appropriate designation of the tool would be a toothed beater-in.

smaller one in Kent's Cavern. Both are of bone and both are concavo-convex in cross section and in both dents the (spaces between the teeth) are of varying depth. The Mortlake specimen has fairly regular teeth of equal length; in the Kent's Cavern



specimen the teeth are apparently slightly more varied in shape, but owing to three of them having been broken off it is not possible to say anything as to their original length. They are both very rough on the concave side due to the exposure of the

spongy interior portion of the bone of which they are made. The ornamentation is crude, consisting of crossed lines, etc., and the common circled dot.

E. T. Stevens, in referring to the collection of this class of tool from the Highfield Pit Dwelling, Salisbury, now in the Blackmore Museum, Salisbury, speaks of them as "bone and horn (red deer's antler) combs," and says regarding them: "These implements closely resemble some in recent use by the Esquimaux for scraping fat, etc., from the backs of skins. The Esquimaux tools are made of wood, with the sharp claws of birds lashed to them. In the Christy Museum there are examples of these; in the same collection there is a Basuto tool used for a similar purpose, the short thick teeth of which are of iron, bound to a wooden handle with twisted fibres. These modern implements help us to understand the use of the ancient tools."¹ From this one must infer that Stevens thought these instruments might have been made for skin-dressing purposes, although he was too cautious to commit himself.

Eleven years later Pitt-Rivers, in describing the excavations at Mount Caburn Camp, near Lewes,² devoted several pages to a description and record of finds of these tools in various parts of England, referred to Stevens' comparison between them and the Esquimo and Basuto skin-scraping tools³ and said of one of them: "the seven teeth in this comb are blunt and rounded at the points, showing that it could not have been employed for combing the hair, and may possibly have been used for driving the weft against the cloth in weaving; the association of such combs in the broch [Pictish tower] of Burrian, where fifteen of them were found, with seven rubbing-bones or calendering implements made of the jawbones of whale, and used for smoothing the web after it is woven, appears to confirm this opinion as to their use."⁴ He spoke of another comb found in the island of Bjorko and continued: "It was believed to have been used in weaving ribbon, and was ornamented with the dot and circle pattern. The small looms in which ribbons are woven are still in use in Norway and parts of Sweden; a drawing of one from Dr. Hazelius's museum of native utensils at Stockholm is annexed. (See cut.) It is 1½ foot in length, and 8 inches high; the ribbon is about 2 inches wide, and the comb of wood that presses up the woof has numerous teeth. As the bone combs under consideration have seldom more than ten teeth, some other system must have been employed than that in vogue in Norway. They may also have been employed in combing flax or wool."⁵ In the cut he gives an illustration of a modern Norwegian ribbon loom, which, in all probability, has long since out-distanced any loom that may have been in existence when the toothed instrument we are discussing was in use, so that the tentative

¹ *Flint Chips*, London, 1870, pp. 64-65.

² *Archæologia*, xlvii, 1881.

³ *Ib.*, p. 10.

⁴ *Ib.*, p. 11.

⁵ *Ib.*, p. 11.

comparison cannot hold good. He also gives illustrations "of four deer-horn combs of like form from Greenland, in the Ethnographical Museum at Copenhagen; they have ten, eight, eight, and seven teeth respectively, and are said to be used for combing flax."¹ Unfortunately, Pitt-Rivers omits to note that flax does not grow wild, if at all, in Greenland, hence it is not likely that the natives required a tool for combing it. One gathers from his statements that he favoured the opinion that these instruments were beaters-in.

We now come to the Glastonbury Lake Village explorers, Messrs. Bulleid and Gray, who found a large quantity of these implements at this settlement. After stating that, as recently as 1872, opinions were divided as to the purpose of the tools, they continue: "But it is now generally accepted that they were employed by the weaver in the upright loom for pushing home the weft (or woof) worked in by a shuttle, and so closing up the threads of the woven fabric—an operation absolutely essential in all kinds of looms. This process is now carried out in the horizontal loom by the swinging sley. These early weaving combs, therefore, served the same purpose as the reed, lay, or batten of our own time."² Here we have a positive opinion as to the function of this peculiar tool, of which many illustrations are supplied. To support their view the authors give us a diagrammatic representation, showing how the teeth of the tool, fitting into the warp dents, act both as a warp spacer and a beater-in. On examining their illustrations of these tools one is struck at once by the difference in the number of teeth—they vary from five to fourteen—and with the wide diversity in the form of the dents; most are naturally wedge shaped, but with varying depths on one and the same tool, a variation which also applies to the dent head which, in a few cases, runs to an extremely acute angle and in others is somewhat more open.

In the Mortlake tool in the British Museum (Fig. 181), owing to the rounded surface of the bone having been left in its natural state, the teeth are not in the same plane, being built on a base concavo-convex in section, hence only the centre portion of the tool beats-in when the convex side is used and only the outer teeth beat-in when the concave surface is used. Then, also owing to the rounded nature of the bone, the sides of the dents converge towards a point about an inch or so on the concave side, instead of every one being parallel to its neighbour, so that, when used to beat-in the warp threads are drawn out of position. As a matter of fact, on trying to use this tool (a facsimile in so far as possible of the Mortlake specimen) instead of obtaining the flawless result illustrated in Bulleid and Gray's diagram (Fig. 183), I got the distorted result shown in my illustration (Fig. 184). But not only was the warp alignment distorted, but in beating-in considerable friction was evoked between the

¹ *Ib.*, p. 12.

² A. Bulleid and Harold St. George Gray, *The Glastonbury Lake Village*. Glastonbury Antiquarian Soc., 1911, I, pp. 268-9.

warp and the teeth. The curved base of the teeth of the beater-in brings the outer dents closer together and their sectional lines instead of remaining parallel become radii, converging at a point on the concave side, thence we have not only the negligible slight occasional contact between every warp and the teeth on either side of it, but a very close contact indeed. In fact so great is this that it amounts to a positive

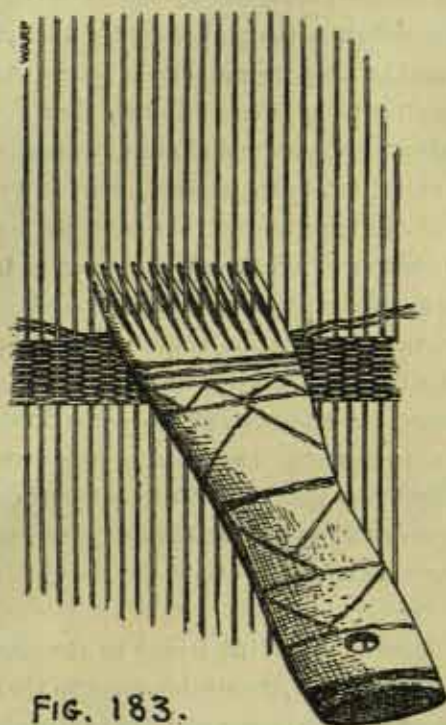


FIG. 183.

FROM BULLEID & GRAY'S GLASTONBURY
LAKE VILLAGE

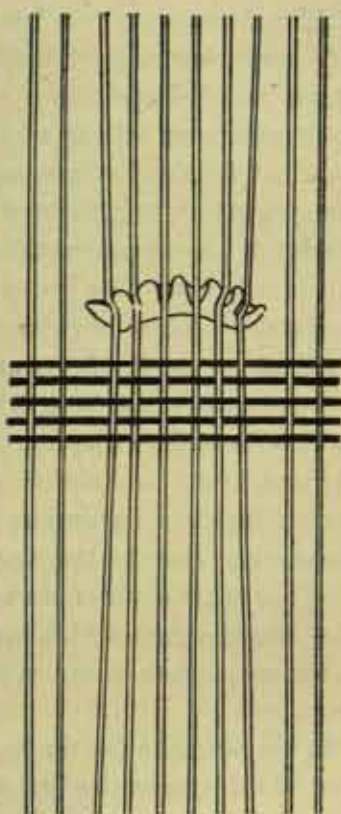


FIG. 184.

WARP DRAWN OUT OF POSITION
BY THE DENTS (OF THE MORTLAKE
QUASI WEAVERS' COMB) WHICH
PARTLY CONVERGE AT POINTS ON
THE CONCAVE SIDE INSTEAD OF
RUNNING PARALLEL TO ONE AN-
-OTHER.

hindrance to the work, necessitating greater hand pressure and decided wear and weakening of the warp. With a beater-in on which the teeth are in a straight base, even if not well spaced, the friction is minute, but, of course, the greater the number of teeth the greater the friction, and this is again intensified with a concavo-convex base. I obtained the same results on warp placed horizontally or vertically, and I may add I tried the original tool on some primitive looms in the British Museum,

which trial first raised my doubts as to the alleged use of the implement. Anyone can make these trials for himself.

In any case Bulleid and Gray's diagram is an anachronism, for if the Glastonbury people used warp-weights (and I think the perforated articles the authors call loom weights are such and not net sinkers) then the vertical loom with these weights was in use. As is well known in these upright warp-weighted looms, the weaving proceeded from above downwards, hence the beating-in must be from below upwards. In Bulleid and Gray's diagram the beating-in is from above downwards—what the Glastonbury people, it is safe to say in the present state of our knowledge, never did on warp-weighted looms. The Copenhagen Museum's Scandinavian warp-weighted loom, as illustrated by Montelius, and the Iceland loom illustrated by Olafsson,¹ show a sword- or dagger-shaped beater-in and so does the Icelandic loom in the Reykjavik Museum.² In the manufacture of the Chilkat blanket on an *apparently* warp-weighted loom, the author mentions no such a tool as a beater-in, saying the whole of the work is done by the fingers.³ In their diagram, too, the authors make the tool flat, forgetting their statement that in cross section these tools "are for the most part concavo-convex."⁴ By this oversight they overcome the difficulty inherent where the dents converge to one point on the concave side instead of being in parallel lines. The very acute angle at which some of the dents terminate must cause the yarn to get wedged and on the withdrawal of the tool some of the warp will get lifted up and so displace the work, thereby encompassing the very object which is most to be avoided. As a minor objection the roughness of the concave portion of the bone where the cancellous tissue of the horn or bone has not been removed is liable to catch both warp and weft and disarrange them.

The chief objections to the use of the "combs" as beaters-in of the weft are:—

1. The concavo-convex base of the teeth, which—

- (a) Cause the warp to be displaced laterally and thereby
- (b) Cause excessive friction.

2. The great irregularity in the width of the dents culminating in the acuteness of the dent heads which have the tendency to "bite" the warp and obstruct working.

¹ Both reproduced in *Ancient Egyptian and Greek Looms*, pp. 34 and 35.

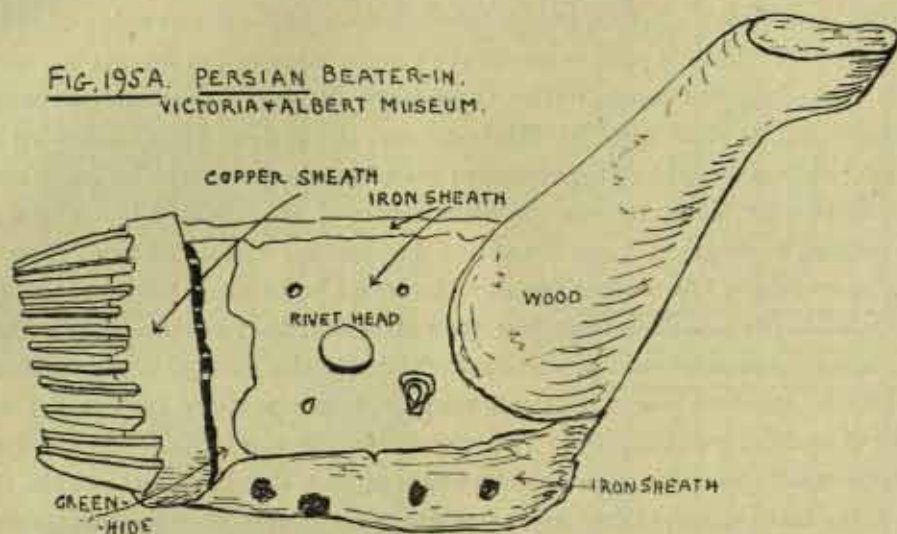
² Daniel Bruun, *Faeroerne, Island og Gronland paa Verdensudstillingen i Paris, 1900*, Kjobenhavn, 1901, p. 25.

³ Emmons, *op. cit.*, pp. 343-4.

⁴ Of the numerous illustrations of these articles with which they supply us only two, numbered B232 and H33, Pl. xlvi, appear useable as weft beaters-in. *Op. cit.*, p. 270.

Hence the conclusion one comes to is that the tool is unsuitable for beating-in the pick and was, therefore, not intended for that sort of work. There may be a few of these instruments which can be made to do the work, but in that case it will be because the obstacles I point out are by chance minimised or absent.

The so-called Egyptian weaver's comb, with its parallel semi-teeth, is quite a different article from the Glastonbury tool, and as I have practically shown,¹ is of



no use for weaving purposes on a warp-weighted loom. A similar article to the Egyptian tool, but with full teeth like the Roman "comb" found at Fort Donald, which may have been used on a loom, is the Wilton carpet-weavers' beater-in. As Wilton carpet weaving is an introduced trade, this tool was no doubt introduced with it and can have no connection with the Glastonbury article. We have toothed beaters-in in India, Persia, Asia Minor, North Africa, etc., but some are almost perfectly straight like the Wilton tool, others are bent like the Aures tool (Fig. 91B) or Lahore tool (Fig. 194A), and others again are doubly bent as the Persian (?) tool (Fig. 195A). As to the alleged comb carved on a panel of a bench-end in Spaxton Church, Somerset,² all the tools there represented seem to me to be cloth-finishing and not cloth-weaving implements, and the article specially referred to by Bulleid and Gray has the appearance of the brush used for putting on paste on certain cloths. But in any case a woodcut illustration of a church wood carving is hardly sufficiently accurate evidence on which to base or support a theory.

¹ "Bishop Blaize, Saint, Martyr and Woolcombers' Patron," *Proc. Soc. Antiq. Lond.*, 1914 and *Bankfield Museum Notes*, 2nd Ser., No. 6, Fig. 11, p. 31.

² J. R. Green, *A Short Hist. of the English People*, illustr. Ed., Lond., 1904, p. 783.

According to the discoveries made on the sites of the Swiss Lake Dwellings,¹ anything like the Glastonbury tool seems to have been very rare—it is possibly mentioned twice. On the site of the Stone Age village of Moossee, where no record is made of metal articles, nor spindle-whorls, nor warp-weights, although it is highly probable weaving was carried on there, "a comb of yew-wood, $2\frac{1}{2}$ inches (or 7.6 cm.) broad and nearly 5 inches (or 12.7 cm.) long" was found.² It is depicted as flat, with nine very regular teeth or eight dents, which, if intended for beating-in, would indicate about 3.2 warp to the inch,³ so that the author appears to be correct in stating that it "was probably used as a comb for keeping up the hair." From the Nussdorf site of a somewhat later age, where no metals were met with, but plenty of spindle-whorls and warp-weights, "three combs were also found, made out of a flat piece of stag's horn."⁴ The teeth of the one specimen depicted look decidedly like those of the Glastonbury instrument and the tool is shown to be convex on one side at least. It appears to be about 3 inches (or 7.6 cm.) long and about $1\frac{1}{4}$ inch (or 3.2 cm.) broad, with seven very irregular teeth or six dents, which, if intended for beating-in, would indicate about 4.8 warp to the inch, but, as in the Glastonbury specimens, the dent-heads run out to such a fine point that great difficulty must have been experienced with them if they were used as beaters-in. No such articles are recorded to have been found at Robenhausen, also a Stone Age site of nearly the same age as that of Nussdorf, with traces of bronze and copper, where, no doubt, owing to special circumstances, a large amount of evidence as to the existence of weaving has been found in the form of charred cloth. At this place was recovered an article described as a wooden knife about 6 inches (or 15 cm.) long, which has all the appearance of a sword beater-in,⁵ as we see it in Peru, etc. The evidence of the Swiss Lake Dwellings is thus not very illuminative for this our enquiry. There is, however, a big field still open for any investigator who wishes to take up the study of the Swiss Lake Dwellers from the weaver's point of view.⁶

There are two tools which bear a close resemblance to the Glastonbury so-called weaver's comb, viz., the Pueblo Indians' toothed beater-in and the Eskimo skin softener (Fig. 186). The Glastonbury and Pueblo instruments are much alike superficially and hence they have been easily confounded. I have in Bankfield Museum two specimens of the American Indian toothed beater-in, one

¹ Ferd. Keller, *The Lake Dwellings of Switzerland*, transl. by J. E. Lee, 2nd Ed., Lond., 1878.

² *Op. cit.*, p. 38, Pl. v, No. 21.

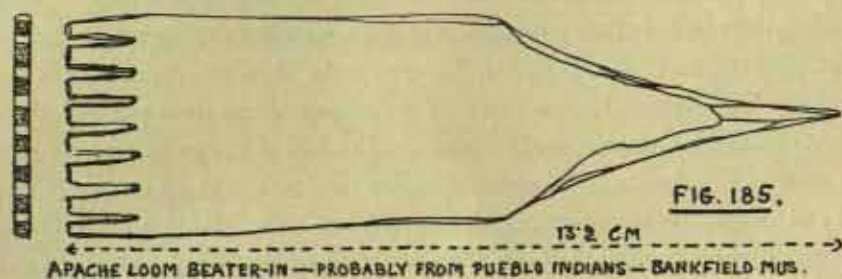
³ I cannot find in the illustrations of cloths given by Keller any in which two warp are laid through one dent as in the Sangir cloth, Fig. 132A, although naturally this does not mean that the Swiss Lake Dwellers did not use this method occasionally.

⁴ *Op. cit.*, p. 119, Pl. xxviii, No. 8.

⁵ *Op. cit.*, p. 52, Pl. x, No. 2.

⁶ On Pl. xli, No. 9, of Keller's work there is an illustration of an article which is described as a "shuttle," but there seems to be no reason why it should not be called a whistle!

from the Navajos, well finished with seven teeth, obtained by exchange from the American Museum of Natural History, and the other (Fig. 185) a rather crude production with six teeth, given me by Miss Mary A. Owen, obtained from some Apaches, who no doubt adopted it from the Pueblo peoples. The Pitt-Rivers, Oxford, Museum's specimen dated 1884, obtained from the Zuni by Prof. Moseley, is a rough specimen provided with eight teeth. Miss B. Freire-Marreco, of Somerville College, has in her possession a sketch of a fairly well finished one with five teeth seen in use by a Hopi Indian at Oraibo.



All these tools are more or less flat and have a more open dent head than the Glastonbury instruments. Washington Mathews gives two small illustrations of the toothed beater-in, which he calls a reed-fork; both are depicted as being flat in section.¹ Miss B. Freire-Marreco, who has studied weaving amongst the Pueblo Indians, very kindly writes me in answer to my enquiries:

"As far as I know, toothed beaters-in used by the Hopi Indians and their Tewa neighbours are more or less flat in section, except for the teeth themselves, which are tapered in section as well as in plan. I know of no direct evidence for the tool being indigenous or introduced into the Pueblo area. On the one hand, the pre-Conquest sites of the Pueblo area have not, as far as I know, yielded specimens of this or any other weaving tool which can be possibly identified as such; on the other hand it seems highly improbable that the Indians should have derived this beater-in from the Spaniards, who introduced the European hand-loom with swinging reed or batten. On the whole I am disposed to consider the toothed beater-in as indigenous to America. Its use appears to be associated characteristically with the vertical blanket loom of the Pueblo and Navajo Indians, which (in spite of Otis Mason's opinion) I believe to be an entirely native development, rather than with the belt loom (rigid heddle) which Otis Mason shows to be probably derived from European models, for, although the miniature beater-in in the Pitt-Rivers collection is associated with a belt loom, I have always seen the weft of the belt loom pushed home with the fingers without any tool, whereas with the vertical blanket loom the toothed beater-in seems to be indispensable."

¹ *Rep. Bureau of Ethnol.*, 1881-2, 1884, p. 382.

Miss Freire-Marreco's experience practically confirms what Washington Mathews tells us about the tool. Although he depicts two of these toothed beaters-in in connection with a belt loom he does not mention it when describing the act of weaving on such a loom, but he does mention its use when describing the act of weaving on a Navajo blanket loom.¹ He tells us the toothed beater-in and sword beater-in are used in ordinary procedure, but that the latter has to be discarded when the cloth is so far finished as not to allow of its insertion any further, for it is too broad for the space left, but into which the toothed beater-in, owing to its narrow flat section, can easily be pushed. It must be remembered, as already explained (vol. XLVI, p. 303, Part I) that the Navajos and other American weavers have a distinct method of beginning their wefting at both ends, or of weaving right up to the warp beam. The toothed beater-in is consequently an instrument specially designed to assist a certain method more or less indigenous to America, and hence it most probably is also indigenous and cannot be the same tool as the Glastonbury and other prehistoric so-called weavers' combs, quite apart from the fact that a concavo-convex implement would not answer the purpose for which the Navajo toothed beater-in is necessary.

I think the above shows clearly that the Navajo toothed beater-in and the Glastonbury alleged "weavers' comb" are quite distinct from each other, and that the latter was not used by weavers for beating in the weft. Such being the case, what was the function of the Glastonbury tool?

The accompanying illustration (Fig. 186) represents some bone tools used by the Eskimo in skin dressing. They differ from the alleged weavers' combs found in Britain in one respect only, namely, in that a portion of the whole cylindrical bone is used instead of a portion of the longitudinal section; in all other respects they agree, so that it seems fairly evident that the peculiar implements we are dealing with were used for skin-dressing and that Stevens, in making the suggestion referred to, was correct in his surmise. I think, in addition, that the opinion that these instruments were skin-dressing tools is supported by the fact that so many of the teeth are broken, which would not occur with ordinary beating-in of weft, but would, and does occur, in the hard work the tool is put to in skin-dressing. The natives of South Africa formerly used very hard thorns wherewith to do the work, now they use iron spikes or nails.²

While we are told that the Glastonbury folk kept a considerable number of cattle and sheep and goats and, from the quantity of articles made of red deer antlers, we may infer they killed red deer, no mention is made in the Glastonbury Records of the dressing of skins, or of the use of skins in any way. The natives must have had skins, but no doubt all traces of any skin or leather have disappeared long ago and hence the explorers are unable to make any record of them. The natives may not

¹ *Op. cit.*, p. 382.

² F. Vaughan-Kirby: "Zululand Skin-Dressing," *Man*, Mar., 1918, 23.

have used skins for clothing purposes, for there is plenty of evidence, in the existence of warp weights and spindle whorls, that they were weavers, but the skins being there must have been made use of and here we have tools which were adapted for dressing the skins and were no doubt used for that purpose. This, so to speak, absence of first-hand evidence of the existence of dressed skins or leather in any form has also, I venture to think, misled Bulleid and Gray as regards the functions of certain pieces of worked wood which, they say, are "presumably parts of looms or appliances for making textile fabric."¹ In Plate LV they show some of this wood

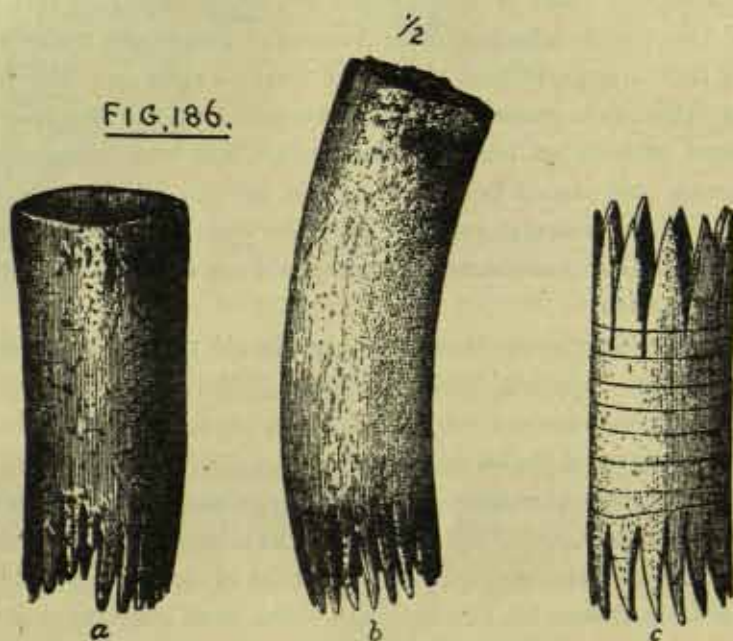


FIG. 301.—Combs for cleaning deerskins.

FROM JOHN MURDOCH'S ETHNOLOGICAL RESULTS OF THE
POINT BARROW EXPEDITION. XIXTH ANN. REP. BUREAU
OF ETHNOLOGY. 1892. P. 301.

made up into a frame as found *in situ*. I am quite unable to make it serve in any way as a loom frame. But if we complete it by merely filling in the twenty small round holes in the frame with pegs protruding on the upper surface we obtain what looks like a skin-dressing frame, such as we find in a primitive form among the Eskimo of Bering Strait as illustrated by Edward Wm. Nelson,² which is an advance on the Zulu method of ramming strong pegs into the ground as explained by E. Vaughan Kirby in his paper on Zulu skin-dressing.³ The two lugs in the Glastonbury frame would not hinder the work of dressing the skin in any way, but

¹ *Op. cit.*, p. 340.

² xviii *Ann. Rep. Bur. Ethn.*, Part I, p. 116.

³ *Man*, Mar., 1918, p. 36.

apart from them the frame is similar in almost every respect to the frame known as a *herse*, used by leather manufacturers in the middle of last century.¹

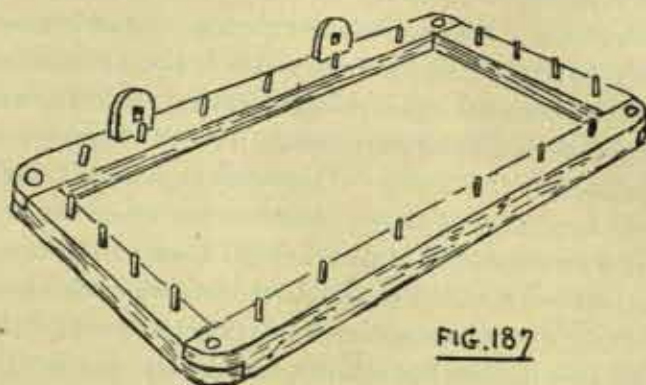


FIG. 187

A POSSIBLE SKIN STRETCHING-FRAME RECONSTRUCTED FROM THE ILLUSTRATIONS OF SUPPOSED LOOM PARTS, ON P.L. LV. OF BULLEID & GRAY'S GLASTONBURY LAKE VILLAGE.

[Although I am obliged to dissent from some of the conclusions arrived at by Messrs. Bulleid and Gray, I hope my so doing will not be construed into any want of appreciation of the excellent piece of work they have accomplished.]

12. CONCLUSION :—ORIGIN AND DISTRIBUTION.

It will be fitting to close these studies with some remarks on the Evolution and Distribution of the Looms which have been under discussion, in so far as there is any evidence to go upon.

Tylor, in discussing the question as to how any particular piece of skill or knowledge has come into any particular place where it is found, says : "Three ways are open, independent invention, inheritance from ancestors in a distant region, transmission from one race to another ; but between these three ways the choice is commonly a difficult one."² It is a very difficult one. Not the least obstacle to coming to a decision is the apparent simplicity of the loom in its earliest stages, for so simple does it appear that one is tempted to pronounce judgment forthwith and say such a simple tool must have suggested itself to mankind in the remotest times and hence have had a common origin. On the other hand, being such a simple tool it must have been invented many times over. Origin or Invention must precede Distribution or copying and is consequently more remote and obscure than distribution, which in most cases is so obvious that it tends to increase the obscurity of origin.

¹ Chas. Tomlinson, *Illustrations of Useful Arts and Manufactures*, London [1858 ?], p. 61, Fig. 267.

² *Researches into the Early Hist. of Mankind*, London, 1878, 3rd Ed., p. 37b.

Origin or Invention requires predisposing circumstances and material, self-control and imagination or mental alertness—the slow progress being due to the fact that the alert-minded portion of the community is generally in a minority. We do not know much about the circumstances conducive to an improvement, nor are we sure we understand the working of the primitive man's mind when brought into contact with circumstances favourable for innovation. It is also an open question whether among primitive peoples every invention is made "into some predetermined form," as maintained by Otis Mason.¹ It may not be possible to get but one result, and in so far the form must be predetermined. Otherwise it can hardly be correct to say the form is predetermined in the inventor's mind. Many inventions are haphazard results; others are results quite different from what was anticipated. Some inventors have only a very hazy notion of what the result is likely to be, whatever object they may have in view, and others again are very clear as to the actual form the invention is to take. Mason is probably nearer the mark when he contradicts himself a few lines lower down, and states that every invention commences "with the relief of discomfort through a happy thought by means of some modification or new use of a natural object." How far physical necessity or advantage urged early man forward is difficult to estimate, for, apart from such pressure, there is the desire to outshine one's fellows—a feeling, perhaps, as strong among primitive peoples as amongst the more highly civilised.

The lower the state of development of a people the lower will be the inventive or progressive situation, so that while we get simple inventions in early times we get simple and complex ones in later times—the reason being that in the later times man has a store of fore-knowledge on which to premeditate. It is not likely to be the case often that man would have the opportunity to invent a complex tool a second time, for complex tools appear late, i.e., when transport, contact, etc., have been quickened, but he can go on inventing new applications of a principle. John Kay invented the Fly Shuttle in 1733, and in so doing adopted the same principle as is used by the Loyalty Islanders in their javelin propeller *Ounep* (Kennedy Collection, Bankfield Museum), of which he could not have known anything. At the start a principle will, generally speaking, not be clear to man, and he will experiment—often, unconsciously, thinking he is doing ordinary work—until out of a hazy conception the principle manifests itself to him. We have seen this in the development of the flying machine. Scheele and Priestley independently discovered oxygen, and Priestley did not know what he had discovered. Darwin and Wallace both formulated the theory of the Origin of Species independently. Professor E. H. Parker has shown that the Chinese script was evolved quite independently of any other.²

¹ *Origin of Inventions*, 1895, p. 15.

² "The Origin of Chinese Writing," *Journ. Manchester Egyptian and Oriental Society*, 1915-16, p. 61.

In this connection it may not be out of place to bring forward an analogous instance derived from the lower animals. Thus, we find in Insects that the faculty of producing silk has been independently acquired in certain cases. Among the caterpillars of the Lepidoptera, silk is the product of a pair of tubular glands which open into the mouth. The silk is liberated at the apex of an organ known as the spinneret. Among certain of the Neuropterous insects, on the other hand, the silk is derived from glands opening into the hind intestine, the threads being discharged through the anus. Whether the silk is identical from the chemical standpoint in all cases is very doubtful, but this point does not invalidate the analogy. The function of the silk is the same, both among the Lepidoptera and Neuroptera, viz., that of forming the cocoon in which the insect may transform into the pupal stage. When we find the principle of independent evolution among lower forms of life we may expect it among higher forms. Hence we have the two methods of shed making—that of "Carton" weaving (*Tissage aux Cartons, Brettchenweberei*) and that of heddle or ordinary weaving.

It is not necessary that inventions of a like nature should all be made at once. A Halifax man, named Hemingway, secured, in 1909, a copyright for a design for an anti-splash sink, that is a sink on which the sides at the top are made to bend over inwards in order to prevent water splashing over. He told me he was led to this invention by noticing the mess made in his scullery by water being splashed on to the floor, and was much astonished when informed later on that the Ancient Egyptians made pots with a rim which had the same effect—probably the forerunner of the vase—which I could show him in Bankfield Museum. Whether this rim was intended by the Egyptian potter to prevent oversplashing when in use we cannot say. It is possible, but, doubtful, whether there may be found in nature two independently evolved organs of like form which have quite different functions. However this may be, the Nicobar Islanders use a back scratcher, *Kanchuat-ok*, which may be correctly likened to a spindle and whorl, the whorl being made out of a disc of coco-nut shell—the specimen referred to is in the E. H. Man Collection in Bankfield Museum. The islanders are, or were, innocent of twisted or spun fibre, using finely split cane instead.

The loom is after all only the frame upon which a principle, weaving, is worked out, and, judging from what has been observed above, there is considerable reason for the supposition that it may have been invented more than once.

When I was in Queensland some years ago, 1878–1884, I found it was common knowledge among bushmen that where the aborigines had been unable to procure European-made axes or knives they had turned to broken glass bottles and converted these into suitable cutting tools. Not only did they make use of old bottles, but on the overland telegraph routes in the early days they used to climb the poles to appropriate the insulators for use as cutting tools, thereby frequently interrupting communications. In some cases they produced from old glass bottles an implement

far superior to anything they had ever possessed before. An illustration of such a glass tool is given by Balfour in *Man*, 1903, No. 35. On the other hand, when, in a Reserve, other aborigines were shown how to set potatoes, they dug them up at night and ate them. This apparently contradictory conduct may be explained thus: In the first instance the aborigines had been accustomed to make cutting tools out of certain minerals, and when they found a new suitable material they proceeded to make use of it for the same purpose. In the second instance they knew nothing about setting tubers, or had only the haziest notions as regards planting of seed for the purpose of collecting a crop later on¹; the prospective benefit of the setting appeared too far fetched to their limited experience and want of self-control, and they vitiated any possible results of their labour by satisfying a more immediate want. The presence of the new material with a cognate pre-existing industry and some mental alertness enabled them to produce an improved article which was a step forward, an invention, while on the other hand a new material without a cognate pre-existing industry failed to excite their imagination or control. In other words, in the discovery of making glass tools they were assisted by a preceding step, while in the potato setting they had no such assistance. To us, with our vast and slowly acquired experience in the matter, the planting of foodstuffs is a reasonable and necessary proceeding, but to these aborigines it was a huge jump from gathering ripe fruits in certain localities at certain seasons, and they had not the power of mind or imagination to carry them so far or to realise what the new action involved. It is when sudden innovations are sprung upon a primitive people that they are staggered—their mental equilibrium gets upset because they are accustomed to go forward slowly step by step. This anti-innovation attitude cannot therefore be attributed to conservatism or obstinacy, as Professor G. Elliot Smith thinks.² He points out how dividual this attitude is with many peoples in various parts of the world, which incidentally makes it a fair example of the "similarity of the working of the human mind," with which opinion, however, he does not agree.³ This attitude is the same as that to which Professor Flinders Petrie refers when summarising the results of his investigations on Egyptian Tools and Weapons and calls the "remarkable resisting power" of certain countries against the introduction of the commonest types. It proves how strong and independent were the civilisations affected.⁴ This attitude,⁵

¹ Although on the West Coast of Australia, according to information given me by the late well-known explorer, A. C. Gregory, the aborigines when digging up *ajuca* or *wirang* (wild yams) re-inserted the head so as to be sure of a future crop (See "Origin of Agriculture," by H. Ling Roth, *Journ. Anthropol. Inst.*, xvi, 1887, p. 131).

² "Ships as Evidence of the Migrations of Early Culture," *Journ. Manchester Egyptian and Oriental Society*, 1915-16, p. 81.

³ *Ibid.*, p. 97.

⁴ *Tools and Weapons*, London, 1917, p. 65.

⁵ In very late or much more civilised times the attitude becomes an economic one. "A peasant does not adopt a new process easily, because he cannot afford risks, while experience

then, which while opposing contact retards distribution, must have considerable effect in permitting the internal slow growing-up of new forms: in other words, must be a stimulus to local origins.

In the case before us the stone tool making industry paved the way for the glass tool industry. This was possibly only taking a first step, but every step, however small, is the forerunner of others, which when they have reached a certain stage are used as landmarks to indicate that a new position or a new form has been attained, which is designated the Origin or Invention of the article involved.

As mentioned at the outset of these papers, the consensus of opinion amongst those who have given attention to primitive weaving is that weaving is indebted for its origin to basketry and matmaking. I am more inclined to think that, owing to the difficulty of making the foundation or centre of baskets, not bags, basketry becomes a side-issue leaving mat-work in a more direct line of evolution from wattle-work. The evolution proceeded probably with intertwined branches to form a breakwind, developing into fairly regular wattle, or more pliable material was brought into use, and then a finer and softer material was used by which mats were produced, the work in the meanwhile dividing into plaiting and plain up and down woven matwork, until for the latter a frame was laid out and the origin of the loom was attained. In the meanwhile spinning in the form of making twine had been discovered and the spun yarn ultimately ousted the non-spun filament used in the matmaking. But long before any such progress could be recorded there were the wattle- or mat-work industries which paved the way. These industries are wide-spread amongst primitive or unrisen people, and the instances are rare in which such people have not yet begun to utilise the natural facilities of their surroundings in order to produce this class of work. Where they have not done so they might have proceeded to do so later on had they been left alone, but the impediment to estimating such a possibility is our want of knowledge of the continuous life of such people, for as soon as we or other races come in contact with them the continuity of their life is broken, the slow step by step Invention ceases, and Distribution with difficulty takes its place.

Throughout the Solomon Islands there is an important matwork industry, not so much of value from the utilitarian point of view as from the decorative point of view, for these people are endowed with considerable artistic feeling. Ornament with them is almost an essential to their well-being. The same material which is used in their decorative matwork is used as warp and weft in their loom. This loom is one step forward from their method of making decorative tubular matwork. In making this one forward step they still continue to produce the same tubular matwork, but now fabricate it on a specially designed frame—in other words, they

shows that an old mode continues to pay." (H. Ling Roth, "Arbère: A Short Contribution to the Study of Peasant Proprietorship," *Journ. Statistical Soc. London*, March, 1885.)

have now invented the loom. As already pointed out, the Solomon Islanders owe nothing to the far-travelled Santa Cruz loom; the whole arrangement, details and method of working of the two frames, are dissimilar, and all they have in common is the qualification that they are both looms. Although not so advanced as the Santa Cruz article, the Buka (Solomon Islanders) loom is clearly an article in the course of being built up as already explained, and the people who make it are, in spite of their savagery, very alert-minded. But the loom is only just a loom and still lacking that essential of all further developments, the heddle, which naturally points to recent evolution, which again precludes inheritance from ancestors in distant regions.

We have, then, the predisposing or preparatory industry in the form of decorative matwork, carrying with it the existence of suitable material, the mental alertness of the people, the extremely primitive form of the loom, freedom from exotic influence, and clean progressive workmanship, which all tend to point to a local independent origin of the Buka loom.

The case of the African vertical mat loom is somewhat different. We do not know how long this loom may have been in existence. The Bushongo have a tradition that a certain chief of one of their allied tribes taught his tribe how to weave, and the other tribes learnt the art from this one. Commenting on this, Torday and Joyce¹ consider that the art was learned before the people settled where they are now to be found. Assuming a possible migration from Ancient Egypt, or assuming a more immediate contact of the Ancient Egyptians and the Bantu-speaking peoples dating back some 4000 years or so, we should expect variations to suit the genius of the adopting party as well as to suit local conditions, and we should expect also to find that the greater the difference between the two, or any two, civilisations, the greater will probably be the variations at the end of the long lapse of time and migration or break of contact. Between Penelope's loom, as illustrated on the Chiusi skyphos and the Scandinavian looms in the Copenhagen or Reykjavik Museums—with a period of remote ancestry amounting to about 2600 years—there is a greater difference than between the Pacific type of loom as it exists on both sides of that ocean, although there is a closer connection between the Ancient Greeks and the Scandinavians than there is between the Ancient Mexicans and those Indonesians who use the Pacific form of loom.

The points in common between the Ancient Egyptian and African mat loom are verticality and the possession of heddles, and, in so far as the working result is concerned, the absence of selvage in the earlier Egyptian productions. The Egyptian weaver used balls of weft hanging above his head from which he drew his lengths of filament as required, much as the Eastern rugmaker does at the present day; he used no spool in so far as is yet known. The African weaver makes use of an early specimen of the needle form of weft carrier. The Egyptian used fine spun

¹ *Op. cit.*, p. 183.

linen yarn; the African uses non-spun split palm leaf filament. The African heddles are but two steps removed in development from the first use of fingers in the raising of the warp, and neither in width nor in length can the African loom-woven mat compare with that of the Ancient Egyptian cloth. These Africans have succeeded in producing artistic patterns as well as pile cloth,¹ results to which the Egyptians never seem to have attained, the whole being, of course, based on non-spun filaments. Some of the looms show improvements in detail over others, that is, they show various stages in building up.

If the African loom is the outcome of remote contact with the Ancient Egyptian, one must ask how is it that both Egyptian forms have not been preserved, for the African to-day only uses the vertical and semi-vertical (or semi-horizontal) form and not the horizontal form? Also, are the divergences and persistences what we should expect to find? As shown above, what we have reason to expect does not occur. Instead of searching so far afield, let us see what wide local influences may have accomplished. There exists among the Bushongo and the closely connected tribes an intensive and extensive mat-making industry, which owes its existence, continued if not original, to the natural abundance of the material provided by the *Raphia* palm leaf. Specimens of this mat-work when brought to Europe by the Torday Expedition showed it to be of very considerable merit, and as such proved a surprise to African students, who could not fail to see that here was a hitherto unknown African people which had attained to a comparatively high state of civilisation. The work is also, necessarily, in every respect quite a contrast to the degenerate products obtained from the West Coast.

We have the matwork industry which, with the concomitant suitable material, could pave the way for further developments, the still early form of the loom, the remoteness from a possible prototype coupled with the wide divergences exhibited between the two looms and the clean progressive workmanship, all of which tend in the direction of an independent local building-up rather than to a possible remote exotic ancestry.

The Egyptian wall paintings of the eleventh dynasty, of at least 2000 B.C., illustrate the horizontal form of loom.² Those of the eighteenth dynasty illustrate the vertical form of loom. In the interval between the earlier and later representations there was the Hyksos invasion as well as the Syrian campaigns of Thotmes III, with the result that alien people in large numbers began to make their appearance in the country. The Hyksos introduced horsemanship³ and long

¹ In the Manchester Museum there is a specimen of pile cloth with an old label attached indicating it to be ancient Egyptian; but Miss W. M. Crompton informs me that the cloth is probably Coptic, and not earlier than A.D. 300.

² *Anc. Egyptian and Greek Looms*, p. 41. On line 4 from top, for horizontal loom read vertical loom.

³ Breasted, *A History of the Ancient Egyptians*, 1908, p. 184.

range archery.¹ It is possible that these aliens may have introduced the vertical loom. Or the second form may have developed out of the first, for we have indeed an intermediate form of loom among the above-mentioned far-off people, the Bushongo, which rests at an angle of 45° on the ground, the weaver squatting under the incline. There is no evidence to go upon beyond the fact that after a considerable turmoil in Egypt we find a vertical loom where previously only a horizontal loom was depicted. However this may be, Egypt gives us evidence of the existence of looms which goes back to extremely remote times, and the evidence is not outdistanced by that of the Sumerian tablets with their records of weaving work given out. The Egyptians were a progressive people: they had a big mat-making industry and *inter alia* at one period possessed bedsteads of which the foundation was strong twisted filament interlaced at right angles on a rectangular frame.² There is, however, a considerable gap between their matwork with its usual non-spun filament, and the linen cloths which have come down to us with their fine-spun filament, and so far we are unable to fill up the gap, but as this is in the line of evolution it presents no great obstacle. If the difference between the two looms is as great as that between the Buka Loom and the Santa Cruz Loom, both as regards form and development, then we can safely say, perhaps, that the Ancient Egyptians invented a loom, which fact would coincide with Professor Petrie's view of the want of Distribution between the two peoples. We have, however, no clue whatever as to the form of the Sumerian loom.

There is a broad, flat, semi-toothed, handled instrument,³ generally spoken of as a weaver's comb, mentioned on p. 130, which appears to have made its first appearance in Egypt in Roman times, for it is not discoverable in any of the numerous Ancient Egyptian weaving scenes. As we see it, it is, of course, not in its original form, and I believe some writers, including myself, have imagined it to be the forerunner of the reed. It could not have been in use with warp-weighted looms. It may have come into use with the introduction of the cloth beam. I now think this so-called comb, this beater-in, was a special device evolved with the invention of pile rugs or carpets where the old sword beater-in would have the tendency to undo the "knotting." On the other hand, I have outlined above the whole course of the evolution of the reed from a notched stick to the complete article, an evolution which can be seen in full operation in Indonesia at the present day. The reed originated in an effort to keep the warp regularly spaced, and the effort ended up not only in thoroughly accomplishing the desideratum, but, outstripping the inceptive idea, made a perfect beater-in as well. There may

¹ W. M. Flinders Petrie, *Egypt and Israel*, 1912, p. 19.

² See the Specimen of a bedstead of the early part of the First Dynasty in the Manchester Museum.

³ *Ancient Egyptian and Greek Looms*, Fig. 22.

possibly have been an embryo reed in the surmised Egyptian warp spacer,¹ but, as mentioned when dealing with it, we are quite without proof from India or Indonesia which would enable us to say it has travelled from Egypt. The cloth made on these looms is very broad and long, and something more than laze-rods is wanted to keep the warp threads spaced, and hence the invention or perhaps a migration from Egypt in later times. In Nigeria we find a peculiar warp spacer (Fig. 98), used with the vertical cotton looms, which may be an embryo reed.

The Pueblo Indians appear to have invented a special toothed instrument for pressing in the warp, originating in the necessity to overcome the difficulty created by their method of beginning to weave at both ends of the warp, which again may be due to their not using heading-rods.

The shuttle traces its origin to a transverse winding of the weft yarn, which tends to make spool and weft together thicker in diameter than when the yarn is wound round the spool longitudinally. At first sight one would think such a clumsy contrivance a poor sort of invention, for it hindered rather than helped the pickmaking. Its very clumsiness, however, led to the adoption of an easing sheath, which paved the way for the evolution of the modern shuttle. This evolution can be seen in various stages in Indonesia at the present day. Ancient Egypt has so far only produced balls of yarn, and at that stage, to the best of our knowledge, the Egyptians left it when their country was overrun by the Romans.²

The rectangular loom frame appears to have sprung from the bringing together and combination of two separately evolved parts of looms, viz., a frame for supporting reed and heddles and their harness to a frame supporting a warp beam. This was in Indonesia. It may very possibly have grown up in another way farther west, which perhaps accounts for its wide distribution in Asia Minor and the Shores of the Mediterranean, etc. Its isolated presence on the West Coast of Africa I have explained as due direct to European influence.

The Ainu have invented a special form of warp spacer, and the Chinese, Japanese, and Koreans make use of a C-spring arrangement for raising the heddles, a form of harness which is peculiar to themselves.

From the above it is clear enough that we have a fair amount of evidence to the effect that some looms and various portions of others have been more or less

¹ *Ancient Egyptian and Greek Looms*, Fig. 23.

² In his very useful book, *Tools and Weapons*, Lond., 1917, Professor Flinders Petrie illustrates, on Pl. lxvi, Fig. 127, a weft carrier which he calls a Roman shuttle. As the illustration is too small for examination, he has very kindly sent me particulars from which I gather that the article is an eighteenth-century English shuttle with exotic decoration. Professor Petrie has since further informed me that he does not know the provenance of this shuttle, which was purchased by him. The other weft carrier which he illustrates, Fig. 126, which he calls a shuttle, is a spool, and not a shuttle. Speaking presumably of Egyptian and Roman weft carriers, he says, on p. 53, "Shuttles are rather rare." Unfortunately, so far, none at all have been found.

invented *in situ*, and do not owe their existence to distribution or copying or from contact with other people, nor from remote ancestry. Of other looms, without our being able to indicate their origin, we can safely say that where they are now met with, they have found their way by migration or contact. Such looms are the African Fixed Heddle Loom, the African Pit Treadle Loom, and the African Horizontal Narrow Band Loom, all probably of Asiatic origin. As regards this Narrow Band Loom it has gone through so many changes during its migration that, compared with its prototype, it is almost unrecognisable. The warp-weighted loom was in evidence in Ancient Greece and also in the Swiss Lake Dwellings and England at the commencement of the Bronze Age. We have records of it in Scandinavian Saga in the eleventh century, and it was probably in use amongst the northern peoples several hundred years before then. It has lasted in Iceland until quite recent years, and may possibly still be worked there by the natives of the sparsely inhabited northern coasts, according to information I received, before the War, from Shetland fishermen who had been there.

To sum up, it seems almost as certain as can be ascertained from such limited studies as these that some looms are of independent invention, others are an inheritance from ancestors in a distant region, and others again have been transmitted from one race to another.

ADDENDUM.

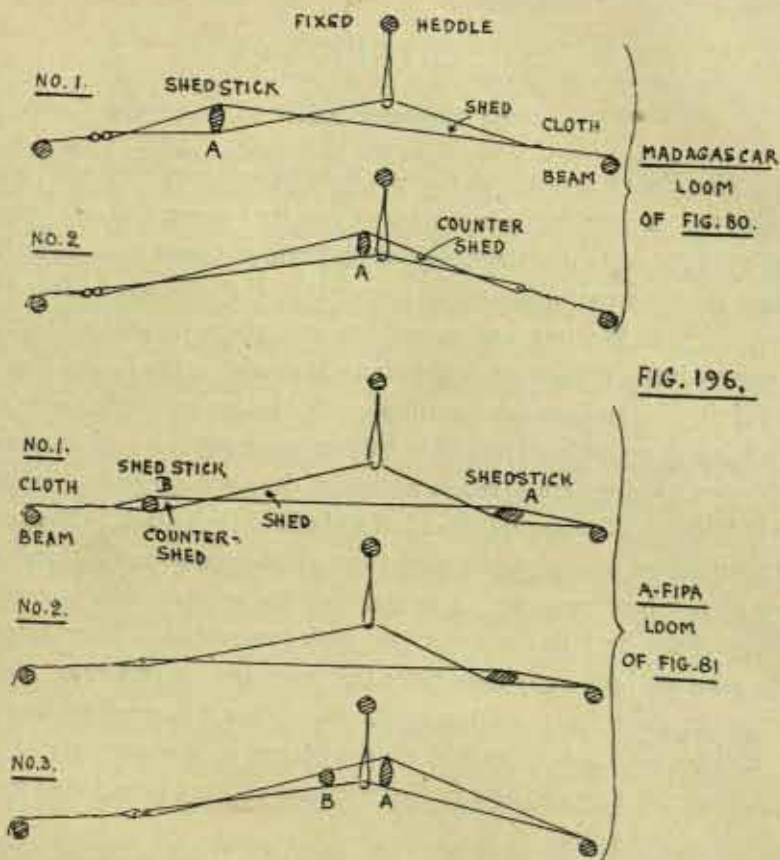
Students having asked me to explain the wefting of the looms, Figs. 80 and 81, I give here the method by means of which I have been able to weave on the principle they typify.

I.—THE MADAGASCAR LOOM.—A pick is made in the shed as shown in No. 1.

The shed stick A is moved up to the fixed heddle, as shown in No. 2, and a pick made. A is moved back to its position as in No. 1 and the original shed is re-formed.

II.—THE A-FIPA LOOM.—The position of the shed stick B, in No. 1, is obtained by placing it as shown in No. 3, where this shed stick carries on the countershed to the fabric. When position No. 1 is obtained a pick is made in the countershed and B is withdrawn when the shed is formed, as in No. 2; here another pick is made. Then position No. 1 is re-obtained by moving A up to the fixed heddle and carrying the countershed past the heddle by re-inserting B.

The A-Fipa weaver makes countershed and shed and then two picks, then countershed and shed and two picks again, and so on, while



the Madagascar weaver follows the usual sequence of shed and pick, countershed and pick, shed and pick again, and so on. There are thus two methods of weaving on a fixed heddle loom.

NO PATERNITY.

By CARVETH READ.

1. IN *The Native Tribes of Central Australia*, Messrs. Spencer and Gillen reported that the Arunta and some kindred peoples believe that the pregnancy of women is due to the entry into them of spirit-children, at places haunted by the spirits of ancestors of some particular totem; and that they do not believe in human fatherhood, or that the nominal father has any share in procreation, although intercourse prepares a woman for conception. Recently, in the *Journ. Roy. Anthropol. Inst.* (No. xlv), Mr. Malinowski describes similar beliefs among Melanesians of the Trobriand Islands, a people advanced in culture much beyond any Australians. In their creed also children are a reincarnation of deceased ancestors, whose spirits return from Motu, a neighbouring island, the abode of their dead, to Merovingia, and enter, or are inserted into, women; whilst sexual intercourse has nothing to do with pregnancy except by "opening" a woman for the spirits; and, accordingly, so-called fathers have nothing further to do with procreation. They act upon this belief: if a man has been away from home two years and, on returning, finds his wife with a new-born child, he is not dismayed, but accepts it in good faith as one of his family. A close approach to such doctrines occurs in several parts of Australia, is suspected to exist here or there in New Guinea, and has been found sporadically in other parts of the world.

The truth of these definite reports as to what the natives say in Central Australia and in the Trobriands is not in question; but it is not unreasonable to ask—what state of mind with regard to paternity do such declarations upon the part of the natives really indicate? One answer is that they believe these things because they know no better: being incapable of putting together the facts of pregnancy and drawing the right inference. Another answer, suggested by Andrew Lang and others,¹ is that the natives do know the truth, or have known it (perhaps not all of them), but that a dogma contradicting such knowledge has been established by the animistic philosophy, and has succeeded in repressing it and even, in many cases, expelling it from consciousness. The share of the male in procreation (according to this explanation) is known, or has been known, not of course in physiological detail, of which 999 in 1000 Europeans are ignorant, but in the sense that sexual intercourse is a cause of childbirth: just as we all know that the turning of a key opens a door, though not one in a hundred understands the mechanism of the lock.

¹ Especially Mr. Walter Heape, whose book, *Sexual Antagonism*, I regret not to have read when this article was written.

17 In *Die Aranda und Luritja Stämme in Zentral Australien* (II Teil, 52), Strehlow says that the Arunta are ignorant of the male function in procreation; but in Note 7 on the same page he adds that "sexual cohabitation is regarded as merely an enjoyment. I could not verify the statement of Spencer and Gillen that it is a sort of preparation for conception and birth. However, the old men knew, as I was assured, that cohabitation is to be considered as the cause of the conception of children, but say nothing about it to the young men and women. It is certain that both the Arunta and Luritja are aware of the relation between copulation and offspring amongst animals; even the children are enlightened upon that point." The trustworthiness of Strehlow's report has been disparaged upon the ground that he was a prejudiced Lutheran missionary, that he was insufficiently educated, and that the editing of his work is unsatisfactory. Possibly: but what he says is not intrinsically improbable. The keeping of knowledge by elders secret from the rest of the tribe is a very common thing; and if not only is the truth concealed but an untruth inculcated, there is evidence enough that dogmas taught by elders or priests may be accepted in opposition to immediate and unmistakable fact.

2. Those who think the Arunta and some other peoples are genuinely ignorant of the facts of procreation give several reasons why such a state of mind probably may exist among them. If man descends (as we suppose) from some sort of animal, they say, there must have been a stage at which such ignorance prevailed; and the Arunta may not have got beyond it. Some such stage, no doubt, but, I should say, at a much lower level of intelligence than that of the Arunta. What do we know about the knowledge of the higher animals? The monogamous family life of some species of Primate is said to be regular and affectionate, and the males treat their offspring as if they knew their relationship to them. Similarly the Arunta are uniformly kind to their children; fathers take part in carrying them when tired.¹ Just where in the course of development this practical paternity was enlightened by comprehension of the physical history it is impossible to say. But we must remember that the knowledge of animals, and a great deal of the knowledge of savages and even of civilised, is not of the discriminated, relational, propositional texture to which, under the influence of formal logic, we are apt to confine the name.

It is further urged, as showing the probability of Arunta ignorance, that between events so wide apart as sexual intercourse and childbirth the relation cannot be observed: it must be inferred; and the conditions are such as to make the inference a very difficult one. Were the stock still restricted to seasonal marriage, indeed, the connection would be easier to grasp. But there is now no special time for intercourse: it is perpetually going on; and the number of sexual acts to the number of births may be a thousand to one. That among many savages intercourse is common before puberty, and therefore resultless, seems to me unimportant;

¹ *N. Ts. of C. Aust.*, 51.

because the change of sexual life at puberty is deeply impressive and well known to savages. But after puberty indulgence, within the class rules, may be unrestrained before marriage, and the offspring few; whilst after marriage there may be all degrees of fertility, and occasional barrenness. Besides, it is said, to perceive the connection between intercourse and birth there must be some estimate of the time that elapses (say) in moons; and how is that possible for people who can hardly count five? At any rate, the natural inference of a savage would be that conception coincides with the experience of quickening, which is nearer to the time of birth, and in relation to it comparatively constant.

Too much stress has been laid upon the moment of quickening as the first symptom of pregnancy. Animistic explanation naturally takes this moment to mark the entry of a spirit into the woman; and this is probably the starting point of the Arunta and similar superstitions. But the first symptom is the cessation of the menses: an event which (considering the deep interest and terror of savages in relation to the menses) must powerfully attract attention. In fact we have not to do with a simple relation between intercourse and childbirth, but with a series of emphatic experiences: (1) intercourse; (2) from one to six weeks later, cessation of the menses; (3) at about four and a half months from intercourse, the quickening; (4) in another four and a half months, labour and birth. Nor is this all; for the series is fused together by further impressive changes, the swelling of the breasts and of the abdomen, and by still other subjective, very variable phenomena, such as euphoria, nausea, sick fancies and longings. These experiences, each deeply impressive, are not far apart: to connect them needs no great reach of memory; events much further apart—even many years apart—are connected by savages. And the series repeats itself again and again on every side, age after age, without losing a particle of its interest; every item of it is freely discussed; yet the series as a whole, we are assured, has with some groups of people, at very different stages of culture, never become a matter of general knowledge, or even been known at all. The necessary "putting of two and two together" seems to me within the power of the average tribesman; but it is not left entirely to him: variability belongs to man at the lowest stages of culture; and in every tribe relatively eminent individuals appear, who cannot be supposed incapable of so much understanding, or to be always bent upon concealing their discoveries in physiology.

It is true that savages whose numerals enable them to count aloud barely five, cannot measure in that way, or communicate one to another, the period of gestation in moons; and this is the case of the Arunta, though not of the Trobrianders. But the estimation of number is not limited by the power of verbal counting: there are, for example, fingers and toes. There are also other ways of measuring duration: a series of events may be known to occupy more than a summer or winter, less than a summer and winter. If knowledge of natural paternity was reached by men (as it may have been) before the loss of seasonal marriage, to reckon the period of

gestation was then much easier ; and possibly in those days the delusions of magic and animism (if they existed at all) were not yet active enough to confuse the commonsense of men and women.

After the loss of seasonal rut, and amongst all extant peoples, the most irregular part of the series from intercourse to birth is the first stage—from intercourse to the cessation of the menses ; and this irregularity is what makes it possible to obscure men's knowledge of the connection by animistic fictions. If knowledge of paternity depended upon deliberate observation in particular cases, it could never be attained without experiment—isolation of women, etc.—which savages would hardly think of, and which could prove nothing if preternatural causes were admitted to be possible. In nothing is the opposition of magic and animism to commonsense so apparent as in this, that their recognition invalidates all natural inferences from experiment and induction. The knowledge of paternity, however, does not depend on deliberate observation, but upon cumulative experience age after age ; in course of which it appears that, although A (intercourse) often happens without B (the rest of the series to childbirth), B never happens without A. This generates a belief that B is dependent on A ; but also that B is not dependent on A alone, or else it would always follow. What else B depends on is unknown ; so it may be magic or the agency of spirits ; and if these "popular philosophies" were not called upon to explain such interesting phenomena it would indeed be astonishing. Accordingly, Mr. Hartland has been able to produce convincing evidence that not only amongst savages but in all societies throughout the world, even where knowledge of paternity is most complete, there also occurs a belief that magical rites or spirits are often adjuvant in conception and, in rare cases, sufficient by themselves. The last point, that they may be sufficient by themselves, is believed in contradiction to whatever knowledge there may be of the function of the father ; that is to say, it is an example of the belief in miracles (common enough) ; and the Arunta, Trobrianders, etc., merely represent the extreme position of believing that spiritual power, which other people regard as auxiliary, is alone operative ; and that the miraculous agency, which others treat as exceptional, is the rule. We must expect to meet with extreme cases.

3. Holding, then, that an outline of the facts of paternity, pregnancy and birth is well within the comprehension of the lowest known savages ; and that the facts, being most impressive and constantly repeated in a definite order, are known to the Arunta, or to some of them (and probably have, in former times, been generally known) ; how are we to explain the trustworthy reports that they and others, in good faith, not merely by conventional prevarication, declare that the part of the male in sexual intercourse has nothing to do with the birth of children ?

The first consideration is that it is possible to know something without knowing that you know it. The case is common ; but to take an example cognate to our subject—The woman of Europe who warns a girl against unchastity because of its

consequences, thinks and speaks of the matter as entirely physiological, and knows that this is true; but, under a strong desire of offspring, she herself may resort to magical rites, or to prayers and offerings. Her knowledge of the fact is then, for the time, excluded by her acceptance of the mischievous doctrine that children are the gift of a saint or deity; and, if the truth still disturbs her, she will rationalise her practice by some vaguely-conceived equivalent or what philosophers call "occasional causes." For the time, she knows the truth without knowing that she knows it: such is the ground of all honest self-contradiction. How long may this state of mind last? As long as delusion is a necessary satisfaction. How widely may it spread? To as many as need such satisfaction. If there is a strong motive generally prevalent to repress any item of knowledge, that knowledge may be generally forgotten.

The second consideration is the power of social leaders to inculcate a dogma. Nothing is too absurd to be believed—even though it lead to impoverishment, harsh restriction of liberty, cruel suffering and death—if it is supported by those who are feared and respected, and agrees with the general character of tribal beliefs. If, then, there are strong interests in favour of the doctrine that pregnancy and childbirth are entirely due to the action of spirits, and if it is the practice of a tribe to adopt animistic explanations, it is possible for such a fiction to exclude and repress the knowledge of natural paternity, and to prevent anyone who may rediscover the truth from obtaining converts to his heresy.

That we should always be able to detect the motives (or all of them) that give rise to absurd dogmas, and exclude whatever knowledge conflicts with them, is not to be expected, seeing how inadequate our information always is concerning the life of a savage tribe; but sometimes we may see light upon the matter. For instance, both the Arunta and the Trobrianders believe in the reincarnation of ancestors; and this requires that at least the spirits of children should not be begotten by natural parentage. It remains to find motives for the extension of the animistic hypothesis to include the generation of the body as well as of the soul.

Among the Arunta and adjacent tribes and those to the north of them I have not been able to find in the reports any indication of a special motive for this extension of the hypothesis.

The Trobrianders have an obvious motive for the denial of male co-operation in the generation of children, namely, the strictness of their matrimonial system. The system requires that the husband of a woman shall be in no way related to her children; and that is precisely what the dogma of "no paternity" secures. Children are always impregnations by spirits of the mother's family, and are even brought for that purpose by *baloma* of the mother's family.¹ Their myth that children are conceived by women whilst bathing is merely a modification of one more

¹ *Journ. Roy. Anthropol. Inst.*, xlv, pp. 405-6.

widely spread ; of which examples from Africa, North and South America and elsewhere may be found in Mr. Hartland's *Primitive Paternity* ; and, in the same work, other instances from places nearer the Trobriand Isles—North Queensland, Seranglao, Ambon, and the Uliase Isles.¹

In his notes on *North Queensland Ethnography*, Mr. W. E. Roth says : * “ Although sexual connection as a cause of conception is not recognised by the Tully River blacks so far as themselves are concerned, it is admitted as true for all animals—indeed, this belief confirms them in their belief of superiority over the brute creation.” To look down upon the brute creation from a desirable eminence may seem a feeble motive for ignoring the facts of physiology ; but, compared with the Arunta, these blacks are a frivolous people.

There is another motive which tends to produce similar “ ignorance,” and may have strongly supported it with both the Arunta and the Trobrianders : the interest of licentiousness. After the loss of seasonal marriage, sexual intercourse is apt to become a luxury, and there arises a plain interest in freeing it from consequences the most serious that can attach to any action. The Trobrianders are very licentious, and (perhaps in less degree) so are the Arunta. The truth is in conflict with native habits and impulses. Hence, among the Northern tribes of Australia about Port Darwin (where similar tenets seem to prevail), missionaries found that incredulity as to the physiology of childbirth hindered the improvement of morals.²

But that one belief may obscure or repress another there must be some conflict or opposition between them ; and (generally) there must be no great biological danger involved in the repression. Mr. Malinowski urges that the employment of magic in gardening does not obscure the native's causal knowledge of the use of gardening. But here there need be no conflict : magic and tillage are supposed to co-operate. There might, indeed, be some danger lest the gardener, trusting to magic, should neglect his work ; but this is prevented by the biological indispensability of his work. Similarly with the intervention of magic in hunting and war : if in any of these things a people was ever so infatuated as to trust to magic only, they perished. There is, however, no danger that sexual intercourse will be at all discouraged by a doctrine of “ no paternity ” ; rather the reverse. Paternity is not its motive. Fecundity may indeed be impaired by irresponsible excesses—to the temporary superficial advantage of a tribe confined to a narrow area—to their ruinous disadvantage if ever they have to face competitors. But until competitors appear there is nothing to chastise their error.

Mr. Malinowski also argues that, whilst one belief may be obscured by another, “ once a physical observation is made, once the natives have got hold of a casual

¹ *Primitive Paternity*, pp. 23 and 85.

² Bulletin 5, § 81.

³ J. G. Frazer : *Totemism and Exogamy*, I, p. 577.

together," it ought to be found uniformly at the lowest stage of culture, and disappear with the progress of culture; whereas its occurrence, as reported, is irregular and sporadic. It exists among the Arunta and Leritja, but not amongst the Dieri and other tribes near Lake Eyre, who seem to be in culture inferior to the Arunta. Tribes on the Murray River, having maternal descent, notwithstanding this, "believe that the daughter is of the father solely, being only nurtured by her mother."¹ The Kulin of Victoria, with paternal descent, hold the same high Boswellian doctrine, that "the child comes from the man, and the woman only takes care of it." An old man, vexed with his son, said: "Listen to me! I am here, and there you stand with my body."² And, again, Mr. Howitt speaks of "the remark made to me in several cases, that a woman is only a nurse, who takes care of a man's children for him."³ The error of these south-eastern blacks is of a different kind from that attributed to the Arunta: it is not a failure to connect a superficial series of facts, but to discern processes of physiology that are necessarily concealed from them. Outside of Australia definite evidence is wanting of any "ignorance of paternity" until we find it in the Trobriand Islands, amongst a people so much advanced in culture that the Australians, left to themselves, might not have reached their level in thousands of years.

I have assumed throughout that (1) the natives and (2) the observers are able to discriminate between what people *believe* and what they *are accustomed to say*. In Europe this is impossible.

¹ Hewitt: *N.T. of S.E. Aust.*, p. 195.

² *N.T. of S.E. Aust.*, p. 255.

³ *N.T. of S.E. Aust.*, p. 284.

ANTHROPOLOGY AND OUR OLDER HISTORIES.

I.—A REVIEW OF SOME ARCHÆOLOGICAL AND ANTHROPOLOGICAL EVIDENCES.

By H. J. FLEURE.

II.—A SKETCH OF REFERENCES TO EARLY MOVEMENTS OF PEOPLES IN THE OLDER HISTORIES.

By H. J. FLEURE and MISS L. WINSTANLEY.

I.—A REVIEW OF SOME ARCHÆOLOGICAL AND ANTHROPOLOGICAL EVIDENCES.

By H. J. FLEURE.

A STUDY of some racial types in modern populations showed me that the distribution of these types had unexpected archæological correlations. The modern populations were studied for their own sake, but it was only when archæological correlations were drawn in long afterwards that hypotheses valuable for the former purposes were reached. The points which concern us at present arose through the study of the distribution¹ of certain stalwart dark broadheaded people in the modern population. It will thus be best to begin with a revised survey of that distribution. This is done, however, without any desire to over-emphasise the value of such evidence; it cannot be compared with that obtainable from ancient monuments and their contents.*

MODERN POPULATIONS.

The chief known locations (in Europe) of this type are here given in series from south-eastern around to western Europe, the name Europe being used to include the Mediterranean region.

¹ Fleure, H. J., and James, T. C., "Geographical Distribution of Anthropological Types in Wales," *Journ. Roy. Anthropol. Inst.*, xvi, 1916, see esp. figs. 2-5, 7, pp. 84, 95, etc.

² See Giuffrida-Ruggeri, V., "Antropologia é Archæologia," *Arch. per l'Antro. é la Etn.*, xvi, 1916. It will be seen that I am in agreement with the author on the general point.

(1) Mr. H. J. E. Peake tells me he knows the type well among the merchants of Athens and the rich Greeks of Alexandria.

(2) Ripley¹ and Seligman,^{2a} quoting from Bertholon and Chantre, mention broadheaded men in Gerba island, off Tunis, and in certain spots in Tripoli, Tunisia and Algeria, not always near the coast. They are short, like Seligman's brachycephals of South Arabia.

(3) Livi² finds that Salerno district has an average cephalic index of 83.4 and Bari of 82.3. From his map one might perhaps argue that these are outposts of the broadheads of North Italy, but the more probable suggestion is that they are descendants of coastal settlers of some period. Ripley³ gives a photograph of a Salerno broadhead who seems to be of our type and not a hypsicephalic Balkan man or a North Italian Alpine. Ripley⁴ thinks that the Bari broadheads are recent immigrants. Livi's map is clearer than Ripley's condensation of it, and I am much indebted to Professor Giuffrida-Ruggeri⁵ for pointing this out. It may be noted that Livi also finds a rise of cephalic index round about Siracusa and Girgenti on the south-eastern and eastern Sicilian coasts.

(4) Ripley⁶ shows tallness and broadheadedness for Venetia with some increase of pigmentation as one moves from the Alps to the sea. This may be interpreted in many ways, but photographs, statements of travellers, and old Venetian portraits, lead one to suppose that our type is an element there.

(5) Oloriz found broadheads in north-western Spain, in Asturias and around Oviedo, also along the Andalusian coast from Motril to Moguer, save near Cadiz. In the south they do not extend far inland.⁷

(6) Preliminary observations in *Gallia Narbonnensis* seem to indicate that the type occurs there.

(7) Ripley⁸ (from Collignon) shows broadheadedness with tallness and brunetness around the mouths of Loire and Charente, while the colour and head form at least extend up across the base of the Breton peninsula to the Côtes du Nord, where they are shown by many Pêcheurs d'Islande around Paimpol. It has probably been too lightly assumed that all the Breton broadheads are a wave sent out from the Alpines of Central France. A typological study of the different types of broadheads is much needed and one may fairly say that the dark stalwart broadheads of the

¹ Ripley, W. Z., *Races of Europe*, 1899, p. 472.

^{2a} Seligman, C. G., "Physical Characters of Arabs," *Journ. Roy. Anthr. Inst.*, xivii, 1917, p. 214.

² Livi, R., "L'indice cefal. degli Ital.," *Arch. per l'ant.*, xvi, 1886, map.

³ Ripley, W. Z., *op. cit.*, figs. 87-88, pp. 270-1.

⁴ *Ibid.*, p. 270.

⁵ Giuffrida-Ruggeri, V., *op. cit.*, p. 26.

⁶ Ripley, W. Z., *op. cit.*, p. 258.

⁷ Abstracted from a reference in Fleure and James, *op. cit.*, p. 138, *q.v.*

⁸ Ripley, W. Z., *op. cit.*, pp. 38-51. Note especially R. Collignon, *Bull. Soc. Anthr.*, Paris, 1890, p. 736.

Côtes du Nord seem rather distinct from the Alpines of Central France. In Fig. 7 of the previous paper the Garonne was wrongly marked as the place for these broadheads, the Loire and Charente are their location.

(8) The distribution of the type along the west of the British Isles, in Orkney, etc., on the Norwegian coast and possibly elsewhere, was discussed in detail in the previous paper.¹ It is well to repeat here that in no case was it claimed that this type formed more than a percentage (19 per cent. in Ardudwy, Merionethshire, being an unusually high proportion) of the people. Supplementing previous notes, information has been gathered concerning the occurrence of the type in Kerry (south-west Ireland). Lieutenant R. U. Sayce, B.A., has kindly sent information that around Callernish, famed for its stone monuments, in Barvas district, Isle of Lewis, Hebrides, is a dark, well-bearded, hairy-chested, bullet-headed stock, contrasting strongly with the Nordics around the Ness. The latter do local fishing while the former enter the mercantile marine. The name of Picts is locally used for these dark people.

It is obvious that much work has still to be done, but there is enough evidence to allow us to make a working hypothesis as to spread of this type from the eastern Mediterranean along routes of coastwise sailing and perhaps also across bases of peninsulas. Its connection with long-distance navigation in several places is a point needing attention.

ANCIENT SKULLS.

Giuffrida-Ruggeri² has done a great deal in tracing evidence from skulls of supposed æneolithic date. This evidence is necessarily much more valuable than that from modern populations. The evidence collected thus far is as follows:—

(1) Elliot Smith³ finds broad skulls in graves, *ca.* First Dynasty (perhaps *ante* 3500 B.C.), so distributed as to hint that they came in from the Mediterranean coast. He calls them maritime Armenoids, but says they have the head less broad, occiput less flat, nose less narrow and prominent, and mandible less massive than the Armenoids. This, as well as Figs. 6 and 7 of Elliot Smith's paper, shows that these people approach our type.

Later in his paper Elliot Smith refers to this element as occurring among sea adventurers far and wide. We agree, with reservations as to the dates the author uses, and have long wondered whether, for example, some broadheaded Polynesian types and others, including some Maori, are not related to the dark broadheads discussed for the European coast.

(2) Faidherbe⁴ found a skull with index 84.4, one of 80.1 and eighteen below 78

¹ Fleure and James, *op. cit.*, pp. 137-140.

² Giuffrida-Ruggeri, V., *op. cit.*, *passim*.

³ Smith, G. Elliot, "Influence of racial admixture in Egypt," *Eugenics Review*, Oct., 1915.

⁴ Faidherbe, "Rech. anthr. sur tombeaux mégalithiques de Roknia," *Bull. Acad. d'Hippone*,

in megalithic tombs at Roknia, north Africa. Sergi¹ thinks the 84.4 skull might be analogous to the broad skulls found in Sicilian æneolithic monuments (*v. inf.*), especially in view of certain finds from Roknia.

(3) Caffici² found at Villafrati, Sicily, one dolichocephalic skull, also three with indices 81.1, 81.9 and 92 which he interprets as foreign immigrants. He thinks that brachycephaly increased in Sicily in the Bronze Age. Sergi³ thinks that from the end of Neolithic time migrants arrived in Sicily who were of mixed race, some Mediterraneans and some broadheads of supposedly Asiatic origin.

(4) Ten brachycephals were found among 63 skulls⁴ at Anghelu Ruju, West Sardinia, of æneolithic date. Giuffrida-Ruggeri⁵ relates these to Crete rather than to Italy.

(5) A skull of index 84.4, with regular and equal curves, was found in the grotto of San Bartolomeo,⁶ near Cagliari.

(6) Sergi,⁷ quoting Jacques,⁸ speaks of 20 dolicho-, 33 mesati- and 8 brachycephalic skulls of the first ages of metal at Argar, south-east Spain. He also notes statements about ancient broad skulls from mines at Cerro Muriano, Portugal. As there are also statements about broad skulls from a possibly late Palæolithic site at Mugem (R. Tagus), more than one interpretation is possible.

(7) Salmon's⁹ maps for skull-finds in France (Neolithic and Æneolithic) show isolated finds of broad skulls in Finistère, Morbihan, Aveyron, Gard, Ariège. These may be outposts, as is suggested, from the central province of brachycephaly, but they may also be remains of immigrants.

(8) As regards Britain, it has become almost a tradition to speak of tall, rough-boned, broadheaded Bronze Age invaders of Great Britain. They are better called Beaker-Makers, from their pottery, and they will be discussed later (p. 167).

Summing up, we may say that the Italian anthropologists provide valuable evidence, but there is not much from other countries on which to build.

¹ Sergi, G., *Europa*, 1908, p. 319.

² Caffici, L., "Vaso neolitico Sicilia," *Rend. R. Acc. Lincei Cl. sc. mor. et. et fil.*, xxv, 1916, p. 155.

³ Sergi, G., *op. cit.*, p. 288.

⁴ *Ibid.*, p. 280, and also Sergi, G., *La Sardegna*, 1907, p. 16.

⁵ Giuffrida-Ruggeri, V., *op. cit.*, p. 9, where further references are given.

⁶ Ardu-Onnis, "Restes hum. préhist. de San Bartolomeo," *L'Anthropologie*, vol. xv, 1904, p. 313.

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⁸ Jacques, V., "Etude Ethnographique," in "Les premiers âges du métal dans le sud-est de l'Espagne," H. and L. Siret, 1887.

⁹ Salmon, P., "Dénombrement des crânes néolithiques de la Gaule," *Rev. mens. d'anthr.*, 5, 1895, p. 155, map.

ANCIENT MINES.

Gowland¹ has drawn attention to the relation between ancient mines and megaliths, and Perry² has worked out these suggestions. With Gowland and others,³ I think that the early working of metal goes back far beyond the Phœnicians in Western Europe, though Gowland's hint about chances of evolution *in situ* seems hardly borne out as regards Britain. The following lists use data from Crawford⁴ as well as from Gowland and Perry.

Gold.—Macedonia and Thrace, Spain and Portugal (north-west corner, upper Ebro, south-east Spain, etc.), Gaul (North-West Pyrenees, South and West Plateau Central, Marne-et-Loire, South Breton coast), Bohemia (Eule, 10 miles south-west of Prague), British Isles (Cornwall, Dolaucothy in South Wales, Merionethshire, South-west Scotland, East Sutherland, Wicklow). Also probably gold washings in sands of Alpine rivers and elsewhere.

Copper.—Cyprus, Eubœa, Macedonia, Albanian coast (perhaps not ancient), Tuscany, Agordo on borders of Tyrol, Mitterberg Alp in Austrian Tyrol, South-east and North-west Spain at least, doubtfully south-west side of Plateau Central, and perhaps Rhone-Saone basin, Cardiganshire, Anglesey, Carnarvonshire, probably St. David's, Cornwall, Isle of Man, North of England, Scotland, Ireland.

Tin.—Tuscan coast and Monte Fummachio in Italy, South-east and North-west Spain, mouth of Loire, Morbihan, Cornwall and Devon and, doubtfully, in late Bronze Age, Wicklow, Bohemia (Erz Gebirge).

These lists show the occurrence of the metals of ancient importance at many points along the coastwise route around Italy, the Iberian peninsula and Gaul (especially Brittany) to West Britain and Ireland.

There is, further, every reason to believe that the list could be amplified in a way that would bring it into still closer relation with the other distributions here noticed. Perry has already drawn attention to the similarity of distribution of ancient mines and megaliths. In the lists above, south-east and north-west Spain, Brittany, Cornwall, and Ireland are of outstanding importance and they are conspicuous for the more highly developed forms of megaliths.

¹ Gowland, W., "Metals in Antiquity," *Journ. Roy Anthropol. Inst.*, xlii, 1912, pp. 235-288, and *Archæologia*, vol. 56, 1898, p. 287.

² Perry, W. J., "Relationship between geogr. distributions megal. mon. and ancient mines," *Mem. and Proc. Manchester Lit. and Phil. Soc.*, vol. ix, 1915, No. 1.

³ See especially Déchelette, J., "Chronologie préhist. de la péninsule ibérique," *Rev. Archéol.*, 1908, ii, p. 219 ff.

⁴ Crawford, O. G. S., "Early Bronze Age Settlements in Britain," *Geogr. Journ.*, xl, 1912, p. 197.

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⁴ Crawford, O. G. S., "Early Bronze Age Settlements in Britain," *Geogr. Journ.*, xl, 1912, p. 197.

MEGALITHS.

Megaliths have been discussed by Fergusson,¹ Miss Stokes,² Pitt-Rivers,³ Borlase,⁴ Montelius,⁵ and Déchelette⁶ amongst others, and the present notice does not pretend to be a fresh general survey. It is hoped that such a survey will supersede the present notes as soon as possible: it is much needed.

The distribution of standing stones, apparently the simplest of megaliths, in France emphasises the importance of the line Narbonne-Brittany at the time or times when they were set up.

The dolmen, following Déchelette and Montelius with small reserves, is here understood as a monument in which certain standing stones wall in, save for a doorway, a chamber covered essentially by one great capstone. Some are built of rude blocks, others are of flat slabs and may be later in date, others are walled in on all sides, but have one or two round or half round holes in one of the side walls. Earth may be heaped against the standing stones, but the dolmen often stands free and is sometimes on a mound. It may or may not have a circle of standing stones around it.

Leaving aside megaliths remote from Europe, we note that ancient ones are important in Palestine, especially east of Jordan, also probably late ones made of flat slabs in the Caucasus and Crimea and other parts of the north coast of the Black Sea. They abound in North Africa from the bounds of the ancient Cyrenaica to near the Straits of Gibraltar, and Fergusson marks them especially along a zone a little away behind the coast in Algeria and East Morocco. Montelius suggests that these monuments formerly existed in Egypt, but that greater things superseded them there; other hypotheses are possible.

Notes of dolmens near Edfu and Lado may, however, be found in de Morgan⁷ and elsewhere. Montelius discards old statements about dolmens in Greece and at Saturnia in Etruria, and Peet⁸ discusses the latter case too. Montelius says there are none in Sicily and Sardinia, but Mackenzie⁹ found them, including two of a circular type also known from Brittany, in Sardinia. Corsica has several flat-slab dolmens which Montelius thinks related to those of Southern France.

¹ Fergusson, J., *Rude Stone Monuments*, 1872.

² Stokes, Miss M., "Carte des dolmens de l'Irlande," *Rev. Archéol.*, 1882.

³ Fox, A. Lane (Pitt-Rivers), "Remarks on Mr. Hodder Westropp's paper on Cromlechs, with a distributional map," *Journ. Ethnol. Soc.*, vol. 1, 1868.

⁴ Borlase, W. C., *Dolmens of Ireland*, 1897.

⁵ Montelius, O., "Der Orient und Europa" (Deutsche Uebersetzung) herausg. vom Königl. akad. der schönen Wiss. Gesch. und Alterthumskunde, Stockholm, 1899.

⁶ Déchelette, J., *Man. d'Archéol.*, i, p. 373 ff.

⁷ de Morgan, J., *Les Origines de l'Égypte*, Paris, 1896. *Report. Congrès préhist. français*, Vannes, 1906. Also Capart, J., see *Man*, 1901, No. 69.

⁸ Peet, T. E., *Stone and Bronze Ages in Italy*, 1909, p. 270.

⁹ Mackenzie, Duncan "Dolmens, etc. of Sardinia," *Papers, Brit. Sch. Rome*, v, 1910.

Dolmens are stated to occur in the Iberian peninsula, but information seems to hint that they are rather more specialised megaliths, except perhaps in Catalonia and near the Pyrenees. There is great matter here for a complete survey, which is fortunately in progress.

In France dolmens abound along the line noticed for standing stones and there are two chief provinces near the ends of that line. In Northern France are many holed dolmens. Belgium and the district of Pfaffikon See in Switzerland may be outposts of the French province in this respect.

Montelius does not think the megaliths of Holland and Germany true dolmens, but Borlase, quoting Lisch, believes in true dolmens in Mecklenburg.

In Denmark they abound, and so they do in Sweden near the coast from the boundary of Norway down to the southern extremity. Certain monuments in the Vistula and Dniester regions and in Bulgaria seem to be derived types rather than true simple dolmens.

Rough dolmens, old in type at least, abound in Ireland, Anglesey and Carnarvon, Pembrokeshire and Cornwall, and are found in Gower, south Glamorgan, etc. In several cases they are related to transpeninsular routes.¹ Possible Dolmens occur also in Wessex, etc., but save for the outlying Kits Coty House group near Maidstone, Kent (*v. inf.*, p. 163), there are probably no true dolmens far on the north-east side of the line joining Hengistbury, Hants, to Cemmaes, Anglesey.² Munro³ says Scotland is without dolmens, but Somerville⁴ has described aberrant types from St. Kilda.

The holed dolmen is characteristic in Sweden, Germany (modified), Belgium, northern France. It is found to some extent in Brittany, while there are cases which may be homologous in west Britain. It occurs also in Thrace and Bulgaria, in and near the Caucasus, in Syria and in India.

Elliot Smith⁵ has discussed the origin of the rock-cut tomb and there seems little doubt that it is related to the Aegeo-Egyptian complex of civilization. Peet⁶ believes the rock-cut tomb appears in the Sicilian Eneolithic; he thinks these tombs are absent from north Italy, but he describes them from parts of south Italy, Sicily, Pianosa and Sardinia. Peake has suggested in discussion that perhaps the so-called Allées Couvertes near Arles in Provence may really be variants of the rock-cut tomb.

Long Barrows occur in south-west and north-east England in regions without dolmens. Ballagorry Cairn,⁷ Maughold, Isle of Man, is also related and Man seems

¹ Fleure, H. J., *Trans. Hon. Soc. Cymmrodorion*, London, 1917, pp. 99-102.

² Crawford, O. G. S., see "Early Bronze Age Settlements," *Geogr. Journ.*, 1912, xl, p. 196.

³ Munro, R., *Prehistoric Scotland*, 1899, p. 328.

⁴ Somerville, Capt. W. Boyd, *Journ. Roy. Anthropol. Inst.*, 1912, vol. xlii, p. 46 ff.

⁵ Elliot Smith, G., "Migrations of Early Culture, 1915," also "Evolution of Rock-cut Tomb and Dolmen," in *Essays pres. W. Ridgeway*, 1913, p. 493, also appendix to Perry, W. J., *op. cit.*

⁶ Peet, T. E., *Stone and Bronze Ages in Italy*, 1909, see esp. pp. 201, 211, 280.

⁷ Kermode, P., and Herdman, W. A., "Antiquities of Isle of Man," *Liverpool Marine Biological Committee*, 1904.

to have no dolmens, though Montelius speaks of King Orry's Grave as a holed dolmen. Barnwell's¹ account does not suggest this. Monuments of probably allied type are numerous in the parishes of Kilmartin and Kilmichael, Argyllshire (near the Crinan Canal) and near Loch Etive farther north in the same county.² Arran and the west of Bute also have related cairns.³ The association of a special type of long skull with the long barrow will be discussed in another paper. Knut Sterjna⁴ relates to the English long barrows the gallery tombs of Sweden and supposes the latter to be derived largely from the former; he finds evidences in details of construction and in typology of some finds. The coastwise distribution of the gallery tombs along the south-west coast of Sweden, and their absence from Germany is held to be evidence that the idea came to Sweden by sea.

Allées Couvertes have a large chamber walled by standing stones and roofed by a row of large blocks. Earth seems to have been banked up against the standing stones. Their chief province is Brittany, the Channel Islands and northern France, but apparently they also occur on the plateau of Gers, north of the Pyrenees. Related monuments occur in Cornwall, on the Welsh coast, in Ireland and, it would seem, in St. Kilda. Some Spanish structures have been called Allées Couvertes, but on this point one awaits Mr. Leeds' projected paper with interest.

The typical megaliths of Holland and West Germany have several roofing blocks, and, in Denmark and Sweden, Montelius finds there are transitions from the dolmen to this type. Sterjna thinks apparently that they are complications of the dolmen due to the influence of the idea of the long barrow. The popular name for these graves is Hünebedden or Hünengräber.

Some Bulgarian megaliths, as also some in Polish Galicia, may be related here, though certain of them are more probably stone cists.

The great mounds with a covered passage and a beehive chamber are found, with many variants, in west Asia (Phrygia, Lydia, Caria), in Malta, the Balearics, Spain and Portugal, Sardinia⁵ (Giants' Tombs), possibly in Brittany, though the examples may be elaborate allées.

The type is highly developed in Ireland (Newgrange, Dowth, Moytura, Lough Crew) and possibly allied types occur in Caithness, perhaps including the "horned cairns," and in east Inverness as well as in Orkney. It is possible that some Mycenaean

¹ Barnwell, E., "Great Stone Monuments, Isle of Man," *Archæologia Cambrensis*, iii, vol. 12, 1866, p. 46 ff.

² Munro, R., *Prehistoric Scotland*, 1899, pp. 281-9.

³ Bryce, T. H., "Cairns, etc., of Arran," *Proc. Soc. Antiq. Scotland*, xxxvi, 1902. "Cairns, etc., of Bute," *ibid.*, xxxviii, 1904.

⁴ Sterjna, Knut, "Les groupes de civilisation en Scandinavie à l'époque des sépultures à galérie," *L'Anthropologie*, 21, 1910, p. 1.

⁵ Mackenzie, Duncan, "Dolmens, etc., of Sardinia," *Papers Br. Sch. Rome*, v, 1910.

graves and some Crimean¹ tombs represent another, but an allied development from a pre-Mycenean type. Some Japanese tombs² may also be related here.

Round built-up structures of stone with Cyclopean roofs and, sometimes, two stories, must next be mentioned. The Truddhu of south-east Italy, the Sesi of Pantellaria,³ the Nuraghi of Sardinia, the Talayots of the Balearics, a few structures in western Ireland (*e.g.* on Bishop's Island near Kilkee) and possibly the Brochs in north and west Scotland may be related. Déchelette⁴ thinks the Nuraghi Bronze Age and the Brochs Romano-Celtic. Patroni⁵ makes the Nuraghi early pre-Mycenean.

Finally, in the matter of graves, there are those with vertical walls like the Mastaba⁶ of Egypt, some Phœnician graves, graves in Sicily, Sardinia, on the Tuscan coast, in the Balearics and in the department of Cher in France.

The short cists will be discussed elsewhere (p. 169).

Stone circles occur very characteristically in north Africa, often around dolmens, in south Scandinavia, again around dolmens in several cases, in Bulgaria and Polish Galicia, and, very characteristically indeed, in the west of the British Isles. In the British Isles they have a wider distribution than the dolmens and other chambered monuments. The greatest circles are found in Orkney, Lewis, Ireland and western England. Stonehenge with its trilitha indicates, according to Fergusson,⁷ a relationship with monuments in north Africa, but this is now discredited; the African stones are oil presses. Evans⁸ says that the sanctity of the trilith or ritual doorway was widely prevalent in early religious cult, notably among the Phrygians.

Surveying the megaliths generally, one cannot but think that there must have been many groups of traders and migrants from Æneolithic times onwards. Their customs and monuments may have been different in many cases and the hypothesis is permissible that while they spread at first perhaps looking for good stone and metal, later on they specialised on tin and gold. The early dolmens indicate a spread across western France to western Britain⁹ and Ireland; the more elaborate cyclopean structures seem to show a closer relation to finds of gold and tin and to sea voyages of greater directness. The holed dolmens and perhaps the slab-dolmens seem connected with a more continental zone between Scandinavia and northern France via western Germany, and also between Germany and western Asia and India via Bulgaria and Thrace or via the Caucasus. The part played by the Mediterranean in this

¹ Minns, E. H., *Scythians and Greeks*, 1913, p. 194.

² Gowland, W., "Dolmens of Japan," *Archæologia*, vol. 55, 1897, p. 439 ff.

³ Peet, T. E., *Stone and Bronze Ages in Italy*, 1909, p. 223.

⁴ Déchelette, J., *Man. d'Archéol.* ii, 3, p. 980.

⁵ Patroni, G., "L'origine del nuraghe," *Atene e Roma*, xix, 1916.

⁶ But see Smith, G. Elliot, "Origin of rock-cut Tomb and Dolmen," *Essays pres. W. Ridgeway*, 1913.

⁷ Fergusson, J., *Rude Stone Monuments*, 1872, pp. 410-412.

⁸ Evans, Sir A. J., "Mycenean Tree and Pillar Cult," *Journ. Hellen. Studies*, xxi, 1901, p. 99.

⁹ Crawford kindly suggests that the Kits Coty group indicates a landing in east Britain at a naturally attractive spot near the line of the Chalk Downs.

particular spread seems doubtful. The other "spreads" seem to hint at Ireland as a goal of trade in pre-Mycenean times and perhaps as an important station on a sea route later on, and we may well imagine various groups establishing themselves around its fringes and on the approaches to it. We are helped by the analogy of the European trade-centres on the fringes of India and on the ways thither in recent centuries. Some such hypothesis helps us to understand the patchy distributions of the types of monuments in relation to mines and also to the finds to be studied next. In conclusion of this section it should be mentioned that the association of religion and trade is typical and old-established among many people. Saharan oases are in the power of religious organisations, the sacred Lhasa is a station on a long trade route with gold as a priestly monopoly, and so on.

FINDS ALONG THE ZONES ABOVE INDICATED.

Seven bone objects¹ from Casteluccio, Sicily, and Lazzaro Cavern, Sicily, are like one from Hissarlik II. Cafici² believes that Villafrati finds indicate influences from the eastern Mediterranean. Colini³ thinks the use of metal spread coastwise about the Mediterranean. Cafici links together finds from pre-Mycenean Hissarlik, older tombs of Cyprus and the Aegean, Moarda and Villafrati (Sicily), San Bartolomeo (Sardinia), Dolmens of southern France, Palmella grotto (Portugal), Ciempozuelos (Madrid prov.), Acebuchal and Seviglia (southern Spain). Sergi⁴ draws attention to the superior character (for the region) of the things found at Villafrati. Mochi⁵ thinks there was a spread of eastern Mediterranean industrial types westwards in late Neolithic and Eneolithic times. Déchelette⁶ has the same view and specifies the Aegean islands. Siret⁷ mentions resemblances of the same kind.

Montelius⁸ speaks of Oriental pots at Palmella (Portugal). Related finds at Cintra and also callais beads he looks upon as evidence of intercourse with the east. Déchelette⁹ has a full discussion about callais beads found with megalithic associations at Gers (Pyrenees), Arles (Provence), Le Morbihan, etc. He notes that gold and sometimes copper or bronze is found with them and that callais disappears after glass comes in. He is not convinced of the eastern origin of callais.

¹ Peet, T. E., *Stone and Bronze Ages in Italy*, 1909, p. 204 and p. 286. Orsi, P., "La necropoli di Castelluccio," *Bul. Paletn. ital.*, 1892, 7. Peake, H. J. E., "Origin of the Dolmen," *Man*, 1916, No. 88.

² Cafici, L., "Vaso neolitico . . . Sicilia," *Rend. R. Acc. Lincei Cl. sc. mor. et. fil.*, xxv, 1916.

³ Colini, *Bul. Paletn. ital.*, xxiv, 1899, p. 224 ff.

⁴ Sergi, G., *Europa*, 1908, p. 280.

⁵ Mochi, A., "Aspetti e periode del Neol. nell Ital. contin. e pen.," *Arch. per l'antr. e la Etn.*, xlv, 1915, p. 274.

⁶ Déchelette, J., "Chron. préhist. de la pen. ibérique," *Rev. Archéol.*, 1908, ii, p. 251 ff.

⁷ Siret, L., "Les Cassitérides et l'empire des Phéniciens," *L'Anthropologie*, xix, 1908, p. 162.

⁸ Montelius, O., *Der Orient und Europa*, 1899, figs. 48 and 49 and text.

⁹ Déchelette, J., *Man. d'archéol.*, i, p. 621 ff.

Déchelette¹ discusses resemblances in pottery types between departments of Saône-et-Loire, Haute Garonne, and Charente, Brittany, Spain, Sicily, Cyprus, Hissarlik I and II and also Transylvania and Bohemia. Colouring of dead bodies with ochre, he states, characterised the pre-Mycenean eastern Mediterranean, and the use of ochre was widespread in prehistoric southern Russia, Hungary, Germany, Belgium, France, Italy, Malta, Spain and Portugal. It disappears as the Bronze Age reaches its height.

Déchelette's² valuable discussion of the representation of the human figure in Æneolithic and Neolithic times in the west should be consulted. He refers this effort to an Ægean prototype and traces it around the Iberian coasts and Gaul (Hérault, Tarn, Gard, Aveyron, Marne, Seine, Oise) to Britain, but notes its absence from Brittany, though Breton sculptures show other traces of southern influence. Elsewhere he³ makes the coasts of Asia Minor a starting point and says these figures in their distribution mark a very ancient line of maritime commerce.

The Chalk Drums⁴ of Folkton Wold, East Yorks, show representations of the human face which both Canon Greenwell and Sir A. Evans think are like some on early objects from Hissarlik and the Greek Isles, etc. The same motive occurs on sculptured menhirs of Marne and Gard valleys in France, while clay vessels with this ornament were found by the brothers Siret in Spain. The "butterfly" is seen on gold roundels from the earliest (shaft) graves at Mycenæ, and the "double horse-shoe" recalls the sculptures at Gavrinis, Brittany and New Grange, Ireland. "Above all, the degenerate returning spirals are a reminiscence of Ægean art, and everything points to the transmission of that influence"⁵ to the British Isles, according to the discussion and final accord between Coffey⁶ and Déchelette across the continent and via Scandinavia to Ireland.

Coffey⁶ and Crawford⁷ have discussed finds of gold lunulæ, with valuable schedules independently compiled. From Ireland they spread to Scotland, Carnarvonshire, Cornwall, Le Cotentin, Brittany, as well as south of the Loire mouth. Other lunulæ have been found in Belgian Luxemburg, Hanover and Denmark. This distribution of lunulæ cannot but recall the distribution of the Allées Couvertes and the Hünen-gräber, but the lunulæ may be far from contemporary with either of these. It is, however, not wise to place them too late in the Bronze Age, for it seems well established that one was found at Harlyn associated with a flat celt.⁸

¹ Déchelette, J., *Man. d'Archéol.*, i, pp. 554-564; *Ibid.*, pp. 565-8.

² *Ibid.*, i, p. 584 ff.

³ *Ibid.*, i, p. 595.

⁴ For amplification of this paragraph, see British Museum Guide, Bronze Age, pp. 89-90.

⁵ Coffey, G., *Bronze Age in Ireland*, 1913, ch. xii is important here.

⁶ *Ibid.*, pp. 47-55. Also *New Grange, etc.*, 1912, *passim*.

⁷ Crawford, O. G. S., "Early Bronze Age Settlements," *Geogr. Journal*, xl, 1912, p. 193.

⁸ *Ibid.*, quoting from *Archæol. Journal*, 1865, vol. 22, p. 277.

Coffey thinks halberd types¹ may have come to Ireland from Scandinavia fairly early in the Bronze Age, but they may also have been influenced from Spain. The cutting edge of Irish flat copper celts² was typically fanned out Spanish fashion. As regards swords, those of the Aegeo-Mycenean area³ were developed on lines parallel to those of western Europe, and some western daggers and rapiers were influenced by Mycenean types. Rapiers of Mycenean type have been found in Sicily with Late Minoan III pottery. Reference should, however, be made to Déchelette's⁴ discussion of early Mycenean swords as indicating a probable intrusion (Sir A. Evans' view) of a central European weapon into the Aegean.

The national Irish collection has 24 gold torcs;⁵ one is known from Somerset and one from Cambridgeshire; eight are known from north-west France and one of the same type from Hissarlik II.⁶ Gold gorgets,⁷ probably of Halstatt age, have been found in Portugal (Cintra), Scandinavia, Germany, and Ireland; the last cannot be dated.

Abercromby⁸ thinks that ca. 1350-1150 B.C. a great development occurred in British civilization which was related to Stonehenge. Gold, apparently from Ireland, was abundantly used in thin plates. Foreign influences are traceable in amber beads from the Elbe and the Cimbric peninsula, whence also came two or three bronze pins with globular heads. There are also daggers with Armorican affinities. Afterwards no more gold or amber came for a while. Abercromby believes that before 1500 B.C., Cornwall was not touched by his Beaker people (*v. inf.*), but he notes there later direct influences of Armorica in broad-handled pottery. Pottery from Bush Barrow (Normanton, Wilts) and Winterbourne Stoke shows Bronze Age Armorican influence in Wiltshire.

Crawford⁹ has noted the occurrence of Breton polished stone celts in Hampshire. We thus have a good deal of evidence for close connection between Armorica (broadly) and western Britain in the Bronze Age, and from Abercromby's negative conclusion about Beaker people (*v. inf.*) for a comparative absence of influences from the European plain in that region in the earlier part, at least, of the Bronze Age.

The penetration of Beaker people from Hants up towards the Wiltshire Downs and the Kits Coty megalith make it probable that the two cultures did not remain completely distinct.

¹ *Op. cit.*, pp. 17-19 and 22.

² *Ibid.*, pp. 8-11.

³ *Ibid.*, p. 61.

⁴ Déchelette, J., *Manuel d'Archéol.*, II, i, p. 213.

⁵ Coffey, G., *op. cit.*, pp. 78-9.

⁶ Déchelette, J., *op. cit.*, p. 355.

⁷ Coffey, G., *op. cit.*, p. 63.

⁸ Abercromby, Hon. J., *Bronze Age Pottery*, 1912, *passim*, see especially, p. 110 ff. and pp. 137-8.

⁹ Crawford, O. G. S., "Prehistoric trade between England and France," *L'Anthropologie*, vol. 24, 1913, p. 641.

Again we have the famous case of the segmented glass beads identified as of late XVIII Dynasty Egyptian type and found in graves in Wiltshire. More or less allied types of objects have been found in the Gironde (France) and at Mycenæ.¹

The finds discussed seem to indicate clearly pre-Mycenean trade and culture links between the eastern Mediterranean and western Europe. If Hissarlik II was destroyed *ca.* 2200 B.C., this bespeaks a high antiquity for coastwise trade. The main routes which concern us at present are along the Mediterranean coasts, north and south, and megaliths and ancient mines are evidently related distributionally. The differences in megalith types along different routes may not always be a difference of period, it may be due to differences between activities of different tribes or groups. The more special study of cross continental routes, whether Adriatic-Germanic or Euxine-Baltic, is omitted for the sake of brevity.

It may be noted that Zimmer² thinks the Loire mouth had direct trade relations with Ireland in the first century A.D., the first century B.C., and probably earlier. He supposes that west Gaul traded with Narbo and Massilia. Archæology is thus, broadly, setting back the date of origin of communications for which, as regards later times, Zimmer has gathered evidence. In the present state of the growth of evidence it seems likely that, as shown above, communications were established in late Neolithic or Æneolithic times, from the eastern Mediterranean to western Europe and the Baltic, and that both the coastwise and transpeninsular routes on the one hand, and the transcontinental routes on the other, were used at various times and by various peoples. Probably communications right along the latter were to some extent impeded by the movements, along the European plain, of peoples with a different civilization to be discussed in the next section. The coastwise route would seem to have been fractionated or otherwise disturbed after about 1200 B.C., the date round about which came the historic struggle between Greeks and Trojans. It is probable that Peake³ would ascribe the general disturbances following that time to a spread from Central Europe, the leaf-shaped-sword men being one of the waves of this disturbance; they reached south-east Britain. Apparently the old routes had been reconstituted in a modified fashion by the time of which Zimmer speaks, but Iron Age finds are dealt with in a later section.

THE BEAKER PEOPLES.

Tall, strong, broadheaded men, buried in round barrows, were formerly held to have brought bronze to Britain. It is now widely thought that they did not know

¹ For references, etc., see Déchelette, J., *Man. d'Archéol.* II, i, 368-372.

² See a series of five papers by Zimmer, H., "Ueber direkte Handelsverbindungen Westgalliens mit Irland im Altertum und frühen Mittelalter." *Sitzungsber., königl. Preuss. Akad. Wiss.*, 1909 and 1910.

³ Peake, H. J. E., "Prehistoric Roads," *Archæologia Cambrensis*, Ser. 6, vol. 17, p. 352.

bronze when they came, and recent work identifies them through their "beaker pottery." Some important papers are as follows:—

Pič, *Starozitnosti*, Vol. i, Pt. I, 1889.

Bryce, T. H., "Human Remains, Arran," *Journ. Roy. Anthropol. Inst.*, xxxii, 1902, p. 358; "Cairns of Arran," *Proc. Soc. Antiqu. Scot.*, xxxvi, 1902; "Cairns of Bute," *Proc. Soc. Antiqu. Scot.*, xxxviii, 1904.

Duckworth, "Crania, Stone Cist, Isle of Man," *Man*, 1908, No. 3.

Reche, O., "Zur Anthr. jüngerer Steinzeit Schlesien und Böhmen," *Arch. für Anthr.*, N. F., vii, 1908, p. 220.

Mortimer, *Trans. E. Riding Antiqu. Soc.*, 1910.

Reed, *Book of Buchan*, 1910.

Abercromby, Hon. J., *Bronze Age Pottery*, 1912.

Crawford, O. G. S., "Early Bronze Age Settlements in Britain," *Geogr. Journ.*, xl, 1912, p. 184, followed by discussion with opinions of Sir A. J. Evans, H. Balfour, R. A. Smith, H. J. E. Peake, S. Hazeldine Warren, etc.

Minns, E. H., *Scythians and Greeks*, 1913.

Turner, Sir W., "Craniology of people of Scotland," *Trans. Roy. Soc. Edin.*, xl, 1903, and li, 1915.

Keith, A., "Bronze Age Race," *Journ. Roy. Anthropol. Inst.*, xlv, 1915, p. 12.

Peake, H. J. E., "Racial elements in first siege of Troy," *Journ. Roy. Anthropol. Inst.*, xlvi, 1916, p. 154.

The Beaker People had important centres in Silesia, near the Moravian Gate, in Bohemia and near the junction of Rhine and Main. Their relation to the Tripolje culture and to the Terramare, etc., is outside the scope of this paper. In Britain they made settlements, near landings, on the York Wolds and also northward from about Morpeth to Dornoch Firth. Aberdeenshire is specially indicated. From the east coast it spread across to the Solway, and, farther north, across most of Scotland. It also spread from the York wolds to the Peak district, whence there are fragmentary traces westward. Settlements were made in East Anglia (Crawford) at points where it was possible to sail up the Ouse and land on the Chalk. A few beakers on the Suffolk-Essex coasts and along the Thames may show penetration up navigable streams; a number have been found on and about the Downs between the Upper Thames and the Dorset Coast, where landings may be indicated at Christchurch, near Poole and near Weymouth. One or two finds are claimed for Ireland (Crawford, p. 188) and the localities are Strangford Lough and Moytura, Sligo. It will be seen that the penetration of these peoples is not unlike that of the peoples who came in post-Roman times and that their provinces overlap only slightly those of the megalith builders.

Abercromby has dated the beginning of the Beaker Immigration c. 2000 B.C.

Keith is concerned with people who were strong, tall, muscular, long-faced, with

rugged features, strong noses, overhanging brow-ridges, flattened occiputs and possibly fair complexions.

The Beaker People found in Germany, France (North of Seine) and Lombardy, and generally on the continent, were more typical Alpines, shorter, stocky, with full wide foreheads, no strong brow-ridges, rounded occiputs and short wide faces. Finds from the York Wolds and the short cists of Scotland show much the same type as this latter. Short cists are also found in the Isle of Man. There are indications according to Sternja (*op. cit.*) of fusion of cultures in Denmark after the period of the gallery tombs, and it is a possible view that the short cists may be related to a spread of these Beaker People after they had been in contact with megalith builders in that region and north Germany. The rough type which Keith describes may have been an early wave or may have represented a leader-caste. His descendants, as Keith well says, are an important element in the leader-life of later times in Britain.

The Beaker People, then, speaking broadly, seem to give evidence of ferment and movement round about the end of the third millennium B.C., on the European plain from the Russian plain to Britain.

IRON AGE FINDS.

Bulleid¹ shows that Halstatt Age pottery occurs at Barn Elms, Surrey, Broadstairs, Peterborough, Bucks, Wilts, and also at Ham Hill, Somerset. Bushe Fox² has found Halstatt Age pots at Hengistbury Head like pots from south-west France and the Pyrenees, and Bulleid has found parallels at Glastonbury.

One recalls also (*v. sup.*, p. 166) the find of a gold gorget with Irish relationship and Halstatt Age associations at Cintra, Portugal. All indications are, however, that Halstatt culture came comparatively feebly into Britain, without, perhaps, much immigration. It affected mainly country east of Somerset and a fairly general view is that the Bronze Age civilization long maintained itself in the west of the British Isles and in Armorica.

In the La Tène period evidences of immigration are stronger. Besides coins of Armoric type in Devon and Hants, there is the famed Marlboro bucket which, Evans³ thinks, was brought perhaps in a vessel of the Armoric Veneti. Some Hengistbury pots⁴ help to confirm Evans' suggestion. Bulleid⁵ thinks most Glastonbury pots have affinities with those of Armorica rather than with those of either East or Belgic Gaul. He says May finds the Glastonbury pots are in striking contrast to the late Celtic ones

¹ *The Glastonbury Lake Village*, 1917, vol. 2, p. 494. "Pottery," by A. Bulleid.

² Bushe-Fox, J. P., "Excavations Hengistbury Head," Repts. Research Committee Soc. Antiq. Lond., No. iii, 1915, p. 9 ff. and also review of same by Haverfield, F. *Man*, 1916, No. 31, especially for views as to the dates of this.

³ Evans, Sir A. J. *Archæologia*, lii, 1890, p. 373

⁴ Bushe-Fox, J. P., *op. cit.*

⁵ *Op. cit.*

of Silchester, and the type of the latter is widespread in south-east England (Essex, Kent, Sussex, Surrey, Wilts, Somerset, Hengistbury, but not much from Hants generally). All the evidences are for important links between northern Gaul and south-east Britain in the centuries next before the Christian era and for fairly contemporary links between western Britain and Armorica. Some western sites for the types of pottery noted for south-east England are mostly coastal and are of interest in view of the fairly early and quick spread of La Tène culture to Ireland, perhaps by coastwise intercourse.¹ We have, therefore, in the Iron Age, as in the Bronze Age, some marked contrasts between the east and the west of the British Isles. In the Bronze Age, however, the links of east and north Britain are with the European plain, with the vague area from Baltic to Euxine, Caspian and beyond, which we should like to call Scythia after the ancient fashion. In the Iron Age the links, this time of south-east Britain especially, are with north-east Gaul. One cannot but connect this with the opening of ways through the temperate forests of early Europe. At this time, too, Déchelette² shows that routes between Adriatic and Swiss lakes (via Ticino) and between Adriatic and Baltic were important. Then also the routes through Gaul via the Rhone gained importance. Siret³ thought that the culture relations discussed in earlier sections of this paper were linked with Phœnician trade, but, though Elliot Smith⁴ and Perry⁵ have gone far towards accepting his dating at least provisionally, we may take it that the critiques of Déchelette⁶ and Giuffrida-Ruggeri⁷ make it likely that they were pre-Phœnician. Apart from the date question, Déchelette is full of evidence for Elliot Smith's general doctrine of the influence of culture spreads.

It may be noted, supplementarily, that Peet⁸ argues suggestively for the view that, before Æneolithic times, southern Italy and the islands belonged more to the Ægean than to the Italian civilization, and these relations lasted on into Mycenaean times. He distinguishes from this mainly maritime route another one which led from northern Greece or Thessaly to south-east Italy, and this latter route may quite possibly turn out to be of interest in connection with legendary history.

Having now surveyed the evidences for ancient trade and movement, especially from the eastern Mediterranean to Britain, it is the aim of this paper to establish a *prima facie* case for enquiry into the relation of those movements to the folk traditions, etc., which have been precipitated, as it were, in our older and supposedly legendary histories.

¹ In this connection one should recall the more or less coastwise distribution of dry-stone-walled fortifications in Wales (S. Davids, Garn Fawr, Yr Eifl, etc.) and elsewhere. These need fresh study: their period is very doubtful.

² Déchelette, J., "Chronol. préhist. péninsule Iberique," *Rev. Archéol.*, 1908, ii, also *Manuel d'Archéologie*, ii, pp. 562-3.

³ Siret, H. and L., "Les premiers âges du métal au sudest de l'Espagne, 1887," "Les Cassiterides et l'empire des Phéniciens," *L'Anthropologie*, vol. xix, 1908, p. 162.

⁴ Elliot Smith, G., and Perry, W. J., *op. cit.*

⁵ Giuffrida-Ruggeri, *op. cit.*

⁶ Peet, T. E., *Stone and Bronze Ages in Italy*, 1909, pp. 284-8.

II.—A FIRST SKETCH OF REFERENCES TO EARLY MOVEMENTS BY THE OLDER HISTORIANS.

By H. J. FLEURE and L. WINSTANLEY.

THE classical geographers¹ give suggestive hints of facts linking the *Ægean* and the west, including the Celtic World. Passing by the interesting notice² of a migration from Lydia under Tyrrhenus to Umbria as referring to events later than the Bronze Age, we note some points about the Briges.

Herodotus³ says the Phrygians and Briges of Macedonia are the same, and Athenæus⁴ has it that Briges built tumuli in Peloponnesus, whither they had followed Pelops. Possibly the Briges are the Brigantes further west and they play an important part in legendary history.

The old form of the name Lisboa (*angl.* Lisbon) is Olisippo, which is often claimed to be derived from Ulysses.⁵ This may be fanciful, but it shows the same tendency. Strabo⁶ further says that the Turdetani were the most civilized folk in the Iberian Peninsula and had literature, art, poems, laws and very ancient histories. He speaks of their mineral wealth and places them in southern Spain, with many cities. He supposes they helped to civilize the Celts, to whom they were related.

In Strabo's time there was clearly a tradition of *Ægean* connections with western Europe, a tradition which accords broadly with that of western chroniclers, and in outline is not antagonistic to the facts discussed from anthropology and archæology in the first section of this paper. It is still too early to make correlations in great detail, and much work has yet to be done on Bronze Age distributions but, as the evidence now stands, it seems not unlikely that the intercourse of *Æneolithic*

¹ See, for example, *Strabo*, iv, 4 and 6, and *Pomponius Mela*, *de Situ Orbis*, iii, 6.

² *Herodotus*, i, 94.

³ *Herodotus*, vii, 73.

⁴ *Athenæus*, xiv, 21.

⁵ Kindly communicated by Rev. H. L. Bishop, Lourenco Marques, see also *Strabo*, iii, 4, 3.

⁶ *Strabo*, iii, 6.

and Early Bronze Ages may have furnished a basis for traditions that Strabo and others mentioned.

In post-classical times in western Europe we have chroniclers in various lands mingling their statements with those of the later classics like Diodorus Siculus. Some resemble Virgil in starting from Troy, others begin with Thebes, or Crete or Thrace, or even from Babylon or Egypt. Each chronicle seems to emphasise its own country's part of the story. Some of the material may be derived from learned sources or through Biblical influences, but there seems an element of folk tradition in most. There are also legends of ancient cities, and some survive in mediæval poems like *Huon of Bordeaux* and *Bevis of Southampton*. They have many accretions, no doubt, but as usual they link up with stories of Rome, Crete, even Babylon. Wavrin, again, gives the legend of the Venetians and says that the original refugees who founded the city accepted the later arrived Antenor as their leader. All this hints at mixtures of peoples moving westward in the prehistoric Mediterranean and is not opposed to the data of archæology.

In the British Isles some of the most interesting references to ancient history come in the *Historia Brittonum*, ascribed to Nennius.¹ It is generally thought that Nennius used several sources, of which one was some Irish record or tradition closely cognate with that which went to the building up of *Lebor Gabala*.² Parts of Nennius may have acquired their present form before the end of the eighth century.³ *Lebor Gabala* would not be so old in any form now extant, but in its origin it would be older still.

Later on Geoffrey of Monmouth made his famous translation or compilation (possibly a translation from an older compilation). He probably used some source akin to that which had served for Nennius, but he includes many points about Cornovii, and especially western France, which are not found elsewhere and which have interesting possibilities of correlation with archæology. There is thus some ground for believing Geoffrey had access to a special source, as he claims by his reference to a *liber vetustissimus* from Armorica.

Flinders Petrie has just issued an interesting discussion⁴ of this question. He thinks that Geoffrey's History is essentially an expansion of the Welsh chronicle called Brut Tysilio and an earlier Brut which existed in Brittany ca. 940 A.D. He believes that, as regards the story of Cæsar's connections with Britain in Geoffrey and the Brut Tysilio, there is evidence for believing them to be chronicles independent

¹ On this writer in addition to the English editions and translations, see Zimmer, H., *Nennius vindicatus*, 1893; Mommsen, Th., "Mon. Germaniæ Historia," *Chronica Minora*, Sæc. iv-vii, vol. iii, 1898.

² On this matter see Zimmer, H., *op. cit.*, p. 215 ff., and Hamel, A. G., "Lebor Gabala," *Zeitsch. für Celt. Phil.*, x, p. 97, 1914.

³ See Zimmer, H., *op. cit.*, pp. 50-82.

⁴ Petrie, W. M. Flinders, "Neglected British History," *Proc. Brit. Acad.*, vol. viii, 1917.

of Roman writers and Cæsar himself, relating the story from the other side. He supposes that the British chronicle of this part was not quite contemporary, was perhaps made up at Gloucester by a Romanized Briton, and was independent of Tacitus. With these conclusions we are not directly concerned here, save that they are one more testimony to the possible value of Geoffrey's source or sources. Petrie goes on to discuss the "Brut legend," which is a feature of Brut Tysilio and of Geoffrey as well as of Nennius, and, from the interesting sailing directions given in these legends, he draws the conclusion that it was written out before the time of the Emperor Claudius, under whom the boundary of Mauretania was extended eastward, so that Brutus could not therefore have *reached* Mauretania at the river Malva.

As the Trojan legend was at its height in the first century A.D., Petrie thinks the story was made up then, and so he counts the eighteen first chapters of Geoffrey entirely romance, with perhaps embedded debris of tradition. Our present point is that they are probably debris of tradition, but that they have more historical value, and that that value may be worked out by later research, if the matter be followed out parallelwise in literary criticism of the Bruts and Nennius and Geoffrey on the one hand, and in archaeological and anthropological, including linguistic, distributions on the other.

The chronicles derive the western nations from Trojan, or more broadly eastern Mediterranean origins, and Nennius gives the story of Brut the Trojan's expulsion from Italy, his coming to the Tyrrhenian Isles, his expulsion from Greece because of the killing of Turnus, his coming to the Gauls and founding Tours in memory of Turnus, and his final arrival in Britain. Then he enlarges upon movements to Ireland and the isles of the Scottish Seas, and here we note that the Scotti are said to have come to Ireland from Spain. His list of arrivals in Ireland is (1) Partholon; (2) Nimeth, who returned to Spain; (3) three "*Filii militis Hispaniae*," in connection with whom is related the story of the tower of glass in the sea. Their ships were wrecked, save one from the people of which the later population of Ireland is said to be descended, though others followed them from Spain and contributed to the population.

After a diversion in which Nennius discusses various groups coming to Wales, he proceeds to give an account of the Scotti, who from Egypt wandered past the places of which Petrie speaks (*op. cit.*) as being a list of navigator's points in the Mediterranean. They then reached the pillars of Hercules and spread in Spain. Then they came to Ireland. Their progenitor is said to have been a Scythian noble. A widespread opinion is that most of this came from an Irish source which contributed later to *Lebor Gabala* (the Book of Invasions).

Concerning this we understand that a definitive study is to appear later, but, in the meantime, we venture to use the statements of Zimmer and van Hamel. It appears that in later MSS. the coming of Césair is the first invasion, but this is said to be an accretion and leaving it aside we have the following: (1) Partholon; (2) Nemed; (3) The Fomoraign; (4) The Firbolg; (5) The Tuatha de Danaan;

(6) *Filii militis Hispaniæ*. (1), (2) and (6) seem to have come from Spain, according to Nennius, but as regards (6) the directness of the voyage is emphasised by a story about Ireland being seen from Brigantium in Spain. Apparently (6) are often supposed to be the Goidel or Gael.

The account of their wanderings gives them connections with Egypt and Scythia, and van Hamel (*op. cit.*, p. 173) thinks a false etymology has linked Scotti or Scuit with Scythia and so introduced that country's name. This may be so but, if the direct passage Spain-Ireland has any correlation with the spread of some of the more elaborate megaliths of the Bronze Age, as seems possible, one cannot but remember the Scythian branches of the Trade Routes of the Bronze Age.

Some points named in the sailing directions, and especially Ruscicada and the river Malva, have a curious interest. It is quite possible that Petrie's opinion is correct, that these points were brought into the story in a version written down in Roman times, but those two places are the ends, according to Fergusson's map, of a zone specially rich in megaliths. Now we know that the distribution of the megaliths is often, though not by any means always, related to points on routes of coastwise sailing, and we are therefore not surprised that the points named seem connected with the movements of megalith builders, even if they were the points that navigators of Roman times were still using.

It has been said that comparisons of custom in Spanish Galicia, Armorica, Ireland and the Hebrides would reveal similarities in folk music and in musical instruments of the bagpipe kind, also used in Calabria. Wrestling is also said to be similarly developed in Spanish Galicia and in Cornwall. On these points we reserve opinion pending enquiry. The connections along this line are, however, very important and persistent and stood out in the Middle Ages in connection with pilgrimages from the Celtic world¹ to Santiago de Compostela, where the cult of St. James had grown from a megalithic foundation.

Van Hamel (*op. cit.*, p. 194) thinks that the story about Partholon and Nemed coming from Spain is an intrusion into the story from a learned source. In this part of the tale are included statements about fights with the Fomoraig, and stories of Fomorians from various sources suggest connections with Africa, unless they are possibly the Phœnicians, as some have suggested.

Van Hamel again (*op. cit.*, p. 195) thinks the coming of the Firbolg from Greece is an addition also from learned sources. The Firbolg are apparently the pre-Gaelic people of Ireland; they are said to have been dispersed to the Scottish Isles, etc., by the Tuatha de Danaan. Long afterwards the Picts drove them back to Ireland to be exterminated by the Ulstermen. This notion of an ancient culture connection between Ireland and the Scottish Isles is of interest in connection with archæology,

¹ Jones, G. Hartwell, "Celtic Britain and the Pilgrim Movement," *Y Cymmrodor*, vol. xxiii, 1912.

and reference should be made back to (p. 162) the statements about the distribution of the New Grange type of monument and the great stone-circles.

The Tuatha de Danaan do not appear in the source Nennius used, they probably come out of Irish mythology. A survivor of a battle between the Nemed people and the Fomorians fled to the northern isles and there learned Druidism, Heathenry and Devil Lore. His clever descendants came in fog and darkness to rule Ireland. They had a poet and poetess, a man physician and a woman physician, a smith, a goldsmith and so on. Mackenzie¹ has made suggestions about Scandinavian connections of the Tuatha de Danaan. We also note the strong evidence gathered by Coffey² for the increasing influence of Scandinavian metal work in Ireland with the advance of the Bronze Age (note the smith and the goldsmith).

We must nevertheless avoid hasty identifications, for links between Ireland, the Scottish Isles, Orkney and Scandinavia persisted more or less from Æneolithic times until the time of the Vikings of history. The same type of caution is necessary as regards links with Spanish Galicia, especially in view of what has been said about the persistence of the old trade route, like several other old trade routes, as a pilgrimage route of the Middle Ages. We must also remember that the same name of an eponymous hero may be used for a people at very different periods of their history. Partholon is a name of a people of Roman times in Geoffrey of Monmouth.

Before leaving these Irish sources in order to consider Geoffrey, we may note that the Milesians (Gael) are said to have visited Deprofane³ (Ceylon), India, Asia, Scythia, the Indian Sea and Egypt⁴ in their wandering, and there are Indian stories of ancient trade with, probably, Babylonia. Megaliths in the Nilghiri Hills and on the Deccan have yielded⁵ bronze articles imported in course of trade with Babylonia. Elliot Smith⁶ has made use of most of these points.

Geoffrey of Monmouth has more detail woven into his story of wanderings from the eastern Mediterranean to Britain. The early part of his story seems to have to do with traditions of the Adriatic Italian coasts, perhaps the Terre d'Otrante and the Greek coasts of Epirus and the Gulf of Corinth across the narrow seas. This may prove to be of interest in view of the fact that Peet claims a special eastern and western trade route (Epirus or Thessaly-Italy) as mentioned on p. 170 above. Later on he gives the navigation points more or less like the other writers. Then his wanderers escape from the sirens at the Pillars of Hercules and come to the Tyrrhene Sea (here he or his source seems to leave the Nennius-like record), where they find companions

¹ Mackenzie, W. C., *The Races of Ireland and Scotland*, 1915.

² Coffey, G., *New Grange*, 1912 *passim*, also *Bronze Age in Ireland*, 1913, pp. 64-5, etc.

³ Perhaps more often spelt Taprobane.

⁴ In connection with Egypt, quaint biblical references come into the story, and this has sometimes been held to be a reason for treating the whole story as fabulous. Such a conclusion is rather extravagant in our opinion.

⁵ Crooke, W., *Northern India*, 1907, pp. 28-9.

⁶ Smith, G. Elliot, *Migrations of Early Culture*, 1915, *passim*.

of Antenor in exile from Troy. Their duke is called Corineus and is famed for wrestling and the people are called Cornishmen after their duke. This is of interest in view of Geoffrey's statement about a Breton source.

He goes on immediately to mention a landing in the mouth of the Loire, and we are left to wonder whether the Tyrrhene Sea was a name used indefinitely for western seas, as some have hinted, or whether his wanderers (Brut the Trojan and his companions) kept inside the Mediterranean for a while and then crossed Gaul or even Spain. In this part of the story, Geoffrey, or his source, inserts the tale of the founding of Tours in memory of Turnus, and here he seems to go back to the Nennius-like record again with a slight jerk. The suggestions as to derivation of elements of Geoffrey's story from different sources, with slight misfits at the joints were made to us by Mr. W. S. Davies, B.A., and they seem the best hypothesis to use, at least for the present.

The general resemblance of the route or routes described in these old histories to the zone of ancient mines, megaliths, finds, etc., discussed in the first of this paper is striking, and the many archaeological and historical links between north-west Spain, and what is still the Celtic fringe of Europe, make the similarities more obvious still. Geoffrey's mention of Corineus and Cornishmen hints at the use of the first syllable of the name in naming places. A study of place-names beginning with *Cor*, and a parallel one of names beginning with *Car*, is proceeding and their distribution is significantly related to the zone of intercourse and culture-spread we have considered, and so to the route of the legendary wanderers. Geoffrey's account goes on from the founding of Tours to the landing of his wanderers at Totnes. Here as elsewhere we must remember the long persistence of relations between the Loire mouth and west Britain, and so avoid hasty identifications of Geoffrey's story with particular periods of archaeology.

In his Book II Geoffrey says that after a long peace in Britain, Humber, King of the Huns, landed in Albany, and there was a battle near the Humber in which the Huns were beaten. Lochrine, leader of the Britons, saved Estrildis, a Hun maiden, and married her, and the description given of her is that of a Nordic beauty, though that is a point on which we lay no stress. The general statement about a collision in Britain, however, between people who have come from the Mediterranean and people (Huns) who have come from Germany or Scythia is in striking agreement with what we infer from archaeological study, whether we regard the "Huns" of the story as the Beaker Makers, or the Leafshaped-sword Men or other immigrants, still incompletely identified.

In Book II Geoffrey also discusses divisions of Britain. Cornwall in his work represents the south-west and was fairly distinct, though often in alliance with Loegria or middle England. Loegria gets most attention and we have stories of city-building within it and also of adventures and extensions to York and to Alclud (Dumbarton)

and Carlisle. Cambria beyond the Severn is just mentioned. Albany is north of the Humber.

Loegria is commonly associated with the Ligures, concerning whom we may refer readers to Déchelette's important discussion.¹ He emphasises the distinctness of the Bronze Age civilization in Ligurian districts: the sickle was their great implement, and they seem to have received notions of cereal cultivation and of the use of oxen *via* Central Europe. Myres,² on quite other grounds, speculates as to the origin of many of these advances in agriculture from the parklands near the borders of the steppe. Déchelette thinks the Ligures were the great amber traders of the north Adriatic and he notes their importance in regions where megaliths and Irish gold are absent. In spite of the names Liger (Loire) and Loegria, he fancies there is no archaeological ground for associating north-west Gaul or Britain with the prehistoric Ligures. It will be remembered that Leir comes into Irish story, but it is generally thought that these Leir stories were a late borrowing from Brythonic sources.

We would suggest provisionally that perhaps Ligurian influences, associated with agriculture³ rather than with mining, spread to France and Britain at some period. This agricultural interest might well lead its possessors to begin forest clearing rather than to live on the west-coast moorlands, and that might be connected with the apportioning of middle England to Loegria. Loegria is practically without megaliths and early Irish gold, but that must not be emphasised overmuch as it abounded in forest and swamp and so would not yield many finds. The history is full of the contrast between Albany and the rest of Britain and we cannot but notice in connection with this the spread of the Beaker people and short-cist people over Britain generally to the north of the Humber, *i.e.*, in Albany.

We have seen that, in the Iron Age, Hants and Somerset, and Wilts to some extent, remained related to the life of the west coast route (p. 170), but that as the Iron Age advanced (La Tène period) the importance of Central and south-east England was immensely enhanced. This may be associated with progress of roadmaking and forest clearing. Now, in the course of his Book II, Geoffrey shows Loegria becoming more important, and that book closes with the making of roads, Wilts being the great cross-roads as archaeology hints would be the case. That the mention of a code of laws accompanies the mention of the roads makes the story still more natural. Again, archaeology emphasises links between Scandinavia and north Scotland and Ireland towards the end of the Bronze Age and such links may be said to be suggested in Geoffrey, but we must not make too sure of the periods to which his chapters refer.

¹ Déchelette, J., *Man. d'Archéol.* ii, pp. 6-25.

² Myres, J. L., "Unity in prehistoric times," a chapter in a book by several authors, ed. F. S. Marvin, 1915, under the title *The Unity of Western Civilization*.

³ See *Diodorus Siculus*, iv.

Geoffrey's Book III shows Britain (Loegria, Cambria and Cornwall) entering into relation with the Allobroges, and their duke is Segin (Senones, Sens?). He proceeds to discuss the raid of these Allobroges, Senones and Britons on Rome and with that we seem to touch history, for this is the great raid dated 388 B.C. All this shows south-east Britain at a certain stage entering into relation with north and east Gaul in a new way, and this is at least strikingly like the conclusions reached by study of La Tène finds. Leafshaped-sword Men also had entered south-east Britain.¹

These few points seem to us to show that there is a *prima facie* case for further investigation of possible relations between the older and supposedly legendary chronicles and the data of archæology and anthropology. We could support this still farther by referring to Geoffrey's Book VIII, which, like his Book VII, may be an inset into the general history. He describes the building of Stonehenge as a memorial of the triumph of Aurelius over the Saxons, whereas archæologists mostly agree in dating Stonehenge somewhere within the second millennium B.C. As we infer from archæology that Beaker makers, Leafshaped-sword Men and probably others preceded the Anglo-Saxons as immigrants from the borders of the European plain, we need not be surprised that details may have come to be associated with one instead of with another invasion of this series. Past invasions along a particular route, and perhaps with tribes of similar cults and customs in the main responsible for them, would tend to get mixed up in popular tradition. Geoffrey says that the stones of Stonehenge were brought from Ireland and had been carried by giants of old from the furthest ends of Africa. We note from archæology that Irish gold is found near Stonehenge and that monuments of the Trilithic type are discussed by Evans (see above p. 163) for Asia Minor. We recall also the matter of the segmented beads (p. 167).

A great many more points suggest themselves for consideration in connection with archæology and anthropology from the Irish chronicles, Nennius, the Bruts and Geoffrey, and the mass of western European chronicles of which these form a part. We believe that in this way it may be possible to effect a linkage between anthropological studies and historical studies, and there is at least a hope that correlated distributional study of place-names may give a link with linguistic studies. Thus Archæology and Anthropology hint at an unexpected value of the older and supposedly legendary historians, and suggest that even the chronology of these older historians may have a good deal behind it, whatever may be the truth about Stonehenge.

¹ Peake, H. J. E., "Prehistoric Roads," *Archæologia Cambrensis*, Ser. 6, vol. 17, 1917, p. 352.

SOME SAKAI BELIEFS AND CUSTOMS.¹By IVOR H. N. EVANS, B.A.²

THE Sakai, with some of whose beliefs and customs I propose to deal in this paper, inhabit for the most part the centre of the Malay Peninsula, their great refuge being the mountains and foot-hills of the main range, which forms the backbone of the country. They are forest-dwellers, hunters, and cultivators of land on a small scale.

They are found as far north as the hill regions of Upper Perak, but, so far as is known at present, do not reach the Siamese Malay States. Negrito tribes dwell to the north of the Sakai, and also extend southwards on either side of the main range on the west of the Peninsula (where they fairly recently had a wider distribution) as far as the southern boundary of Upper Perak and the Selama District, and on the east as far as the Tembeling River in Pahang.

The aborigines of the south of the Malay Peninsula are the Jakuns, who are largely Proto-Malays.

There has been a considerable amount of fusion between the three pagan races of the Peninsula along their boundary lines; thus the Sakai of the hills in Upper Perak and Kuala Kangsar Districts show signs of an admixture of Negrito blood. Again in Selangor, Negri Sembilan and parts of Pahang, we encounter tribes of pagans apparently of mixed origin, whose physical characteristics are more of the Jakun than of the Sakai type.

The sections of the aborigines with which the present article is concerned are the pure Sakai of the Batang Padang District of Perak and the Ulu³ Kampar (Perak), the Negrito-Sakai of Upper Perak and the Ulu Kinta, and the mixed tribes on the south of the Sakai country proper. I do not include the pure Negrito and Jakun tribes.

¹ The present paper is based on material of mine contained in a series of notes on various aboriginal tribes of the Malay Peninsula, published in the *Journal of the Federated Malay States Museums* in the years 1913 to 1916. It was originally read at the British Association Meeting at Newcastle in 1916, but since then I have expanded it considerably.

² EDITORIAL NOTE.—In order to explain certain Malay words used in this paper, some notes have been added. Mr. Evans, being too far away for consultation, is not responsible for these notes, which are marked "Ed."

³ The term is frequently applied as meaning the country about a river-source. It is in this sense that I have used it throughout the paper. The *ulu* of a river is its source (or headwaters, from an old Malayan term for "head."—ED.)

I shall, as far as I am able, avoid mentioning the work of others with regard to Sakai beliefs and customs, since it is easily accessible in the writings of Messrs. Skeat and Blagden, and of Rudolph Martin.

My own experience of these jungle tribes extends, at intervals, over the last four years. The Sakai are by nature timid and reserved: their confidence must be gained before it is possible to find out much about their inner life, and even when this has been done, it is generally a case of taking the maximum of trouble to obtain the minimum of result.

The aborigines who inhabit the valley of the Sungkai River—a section of the Central Sakai—have a hazy belief in a Supreme Being, whom they call Yenang. He, according to a story which I was told in that district, is the judge of the dead. The account which was given to me was as follows. "The spirits, which leave their bodies at death by the whorl of hair at the back of the head, pass to the west, and try to get into heaven by the gate at which the souls of Malays enter. This they cannot do, so they go round by another way, until they come to a large iron cauldron full of hot water. The cauldron is spanned by a bridge called *Menteg*, which looks like a tree-trunk with the bark removed. Below the cauldron is a great fire. The souls of little children pass safely over the bridge, for they are without fault, but those of full-grown people fall into the hot water. Yenang takes these souls from the cauldron and plunges them into the fire until they are reduced to powder. Then he weighs them in a pair of scales. If they weigh lightly he passes them over to heaven, but if they are heavy he puts them into the fire again until they are sufficiently purified."

I have considerable doubt whether this story is entirely of Sakai origin. It resembles in some particulars legends of the soul's existence after death which I have heard among the Malays; and such a thing as weighing with a pair of scales is, I believe, quite unknown to the Sakai, unless they have been in contact with people in a superior state of civilization.

The Ulu Kampar Sakai also acknowledge Yenong (Jenong¹ or Yenang), and it seems, both from the small amount of information that I was able to obtain myself, and also from that furnished by others,² that there is some reason for identifying him with the sun. Though I did not get any direct proof that this was the case among the people of the Ulu Sungkai, yet it is worthy of note that swearing by the sun is a form of oath used in that district; for instance, one man, who had been accused by a Malay of informing against him, told me that he replied, "I swear by the sun that I did not tell the 'Tuan,' and, if I lie, may the sun shrivel up my tongue."

¹ It is tempting to compare this term with Jenang or Jenong as used among the Jakun for the name of a tribal chief.—Ed.

² Wilkinson, *Papers on Malay Subjects, The Aboriginal Tribes*, p. 42.

Somewhat vague magical and animistic ideas play a part in the everyday life of the Sakai.

Various kinds of trees are thought to be the abodes of spirits, especially those which have any peculiar deformations or markings. Among the Sakai of the Ulu Kampar, for instance, trees which have creepers coiled round them are supposed to be haunted. If a man has sat near one of these, and afterwards becomes unwell, he will return and cut through the creeper, as this will ensure his recovery. Owing to the same idea, it is unwise to sit down on the interlaced roots of trees.

If trees have souls, much more have animals. The aborigines of the Ulu Kinta, for example, think that it is unlucky to use the proper name of an animal, when they are eating its flesh, and substitute instead another appellation which is often a periphrasis descriptive of some characteristic of it. Thus, the bamboo-rat, which is ordinarily called *takator*, when being eaten is described as *nyam awin*, or "bamboo-meat"; the bear (*ta'pus*) becomes *mes mat* (little eyes); the porcupine (*chekos*), *berjalak* (the thorny one); the "brok" (or coconut) monkey (*dok*) *hoi wet* or *hoi ket*, which is said to mean "no tail"; and the fowl (*manuk*) *chep*, which simply means "bird."

While food of any kind which has a tabu name is being eaten, lice may not be cracked, nor hair burnt in the fire. The breaking of this prohibition would entail the penalty of the offender being seized by a tiger.

In the above-mentioned district also, peppers may not be eaten with the flesh of birds or mammals, as, if this is done, traps set in the jungle will catch no game. This prohibition does not, however, apply to fish.

Apparently, even manufactured articles may have souls; for a Sakai of the Kinta Ulu told me that blow-pipes and other articles, which are placed on graves, are purposely broken. This is evidently done with the object of setting free the souls of the offerings for the use of the spirits of the dead; indeed the Sakai himself, when questioned as to the reason for this custom, replied that a blow-pipe which was intact would appear to the spirit to be broken, while if it were broken it would seem to be intact.

The Sakai take precautions to avoid arousing or angering the Earth Spirit, who, when he wishes to be revenged, sends plagues of rats or other vermin to destroy their crops.

Among the Besisi of Selangor, a tribe of mixed origin, it is, for this reason forbidden to strike a working-knife into a tree-stump and leave it there; while the Kampar Valley Sakai do not like anyone to knock on the ground with a billet of wood. These people also did, and may still in some cases, resort to a peculiar method of divination before making a clearing for padi planting, the object being to ascertain whether the Earth Spirit would allow them to fell the trees on the piece of land which they were desirous of cultivating.

When a suitable piece of ground had been chosen, the Sakai went to the site

proposed for the new clearing and repeated some spells. They then swept all rubbish from a small piece of ground and enclosed it within a frame made of four pieces of wood, each about a foot and a half long. The pieces of wood were called *galang dapor*.¹ Incense was burnt within the square and, if much smoke arose from it, this was regarded as a sign that the padi crop would be plentiful. Next little cups made of *lebak* leaves, containing incense, water, *lebak* leaves, and rice-flour were placed within the enclosure. The man who performed the ceremony then covered the square over with leaves and everybody went home. If the performer dreamed on that night that the place was not good, another site was chosen for the clearing. Dreams about fire or a piece of wood wrapped in a mat (*i.e.*, a body ready for burial) were regarded as inauspicious. Provided that the celebrant's dreams were favourable, the Sakai went on the next morning to the chosen site and uncovered the square of ground which they had swept. If the ground under the covering of leaves was undisturbed, they looked upon this as a sign that they might make the proposed clearing; but if they found any adventitious substances under the leaves, such as rubbish of any kind or twigs or scraps of wood, another site had to be selected and the performance repeated. If some rubbish had merely fallen on the leaves covering the square, the clearing might be made, though this was regarded as a sign that some visitor from another settlement would die in the house. If a clearing were to be made after rubbish had been found under the covering leaves, it was thought that this would result in the death of one of their own people.

Various other customs and beliefs are connected with agricultural operations, and in the Ulu Kampar I obtained the following particulars with regard to some of them:—

Tabu signs (*gawar-gawar*)² are hung up across the approaches to a clearing and outside the houses on the first day of padi-sowing to warn the people from other settlements that they may not enter; but the tabu period is only for one day.

In making a clearing the first step is to cut away the undergrowth. This work is continued for three days, and then a one day's interval takes place. When the undergrowth has all been cleared, the felling of the big trees begins, and here again, after working for three days, the Sakai rest for a day.

During the first three days of clearing undergrowth it is tabu to touch the working-knife of a man who is engaged in the work. Similarly during the first three days of felling the big trees nobody may touch an adze belonging to another man.

While the padi crop is being reaped, the settlement is laid under certain tabus

¹ *Galang dapor* (Malay) = "Hearth-frame timbers"—a phrase also applied to the framework of timbers which encloses a Malay grave.—Ed.

² So in Malay.—Ed.

for a period of six days. During this time cigarettes may not be smoked nor blow-pipes or fish brought into the houses. Tabu signs of palm-leaves are hung up as a warning.

When the young padi has sprung up, no bamboos or rattans must be cut near the clearing until the crop is ripe.

The season for sowing padi is when the *petai*¹ fruits are ripe and those of the *durian* and *prah* nearly so.

The following details with regard to times at which it is forbidden to work on a clearing were obtained from a Sakai of the Ulu Kinta.

Work on a clearing is forbidden when

1. the moon 'falls' at the rising of the sun (three days' tabu);
2. the moon is at the full and looks 'swelled' (three days' tabu):—It is said to be 'about to give birth';
3. the moon is beginning to decline and is 'notched like a reaping knife' (three days' tabu):—It 'has given birth';
4. the old moon is about to die (two days' tabu);
5. the new moon appears (two days' tabu).

If work is done when the new moon is about to die, somebody in the house will die. If work is done at the new moon, wild pigs will come and damage the crops.

The rice-soul or the millet-soul appears to be taken in many districts; for instance, among some of the mixed tribes of Selangor and Negri Sembilan, the Sakai of the Ulu Kinta in Perak, and the Negrito-Sakai of Upper Perak. The last-mentioned told me that they took the millet-soul, the ceremony being performed by an old woman, who on the first day of the proceedings, before reaping had begun, went into the crops and cut about a *gantang*² measure of the millet-heads. On the second day she took the same amount, but on the third day no reaping might be done, while on the fourth general harvesting was started. Flowers, water and *sirih*³ leaves were placed near the millet-soul, which was hung up in the house, and finally mixed with grain reserved for seed purposes.

Among the Sakai of Ulu Kampar it appears, however, that the rice-soul is the last of the crop to be reaped, seven standing ears of padi being tied together on the first day of reaping and incense burnt before them. Sufficient padi to fill two or three reaping baskets is left around them, this being the rice-soul's companion.

¹ *Petai* (Malay): a wild jungle fruit, identified as *Parkea biglandulosa* (Leguminosæ), a tree of which the pods are eaten by the Malays. *Durian* (Malay) = *Durio Zibethinus*, which bears the well-known durian fruits. *Prah* (Malay): a tall straight tree identified as *Mezzettia leptopoda* (Anonacæ), a tall jungle tree with edible fruits, remotely reminiscent of the chestnut, of which the aboriginal tribes as well as the Malays are fond.—Ed.

² *Gantang* (Malay): a Malay measure of capacity, roughly taken as a gallon.—Ed.

³ *Sirih* (Malay): the aromatic betel-leaf, chewed by Malays for its pungency as a species of stimulant.—Ed.

The rice-soul is finally reaped and hung up, incense being burnt under it for six days. After this the rice-soul and its companion are mixed with the seed for next year.

By the Bési I was told that the rice-soul was taken in the case of swamp-rice, but not of hill-rice. If this is so it looks as if the custom might here have been adopted from the Malays, since the dry-growing varieties of rice are far more planted by the aborigines than those which require irrigation.

The Sakai idea with regard to sickness appears to be that diseases are generally, if not invariably, caused by spirits. A man of a mixed tribe from the Seriting River in Negri Sembilan said that illness was caused by a spirit lying in wait for a human being and striking his shadow with a club.

Some curious beliefs are also held with regard to the causation of sickness by sympathy. The Sakai of the Ulu Kampar told me that if a man, while out in the jungle, suffers from a sensation of swelling at the stomach, and remembers that he has thrown away a cigarette-end or some remnants of food into a pool, a bamboo stump, or any other place containing water, he will return to search for and remove what he has thrown away.

Again, in the same district, if a young child should suffer from any itching complaint, the navel-cord, which appears to be usually buried under the house, is dug up and inspected: if this has been attacked by ants, they are killed with hot water, and it is re-buried in another spot.

Similarly if a man is on a journey in the jungle and is troubled with a rash, or with itching sensations in his body, he will return to his last camping-place and dig up the ground on which he lay, to see if there is an ants' nest in the soil.

Sometimes if a man becomes ill when on a journey, and recollects that he has left a pole of the shelter in which he spent the previous night standing in the ground, he will return and pull it up, thus ensuring his recovery.

The belief that spirits interfere in human affairs, either for good or evil, creates the necessity for a person who is either able to appease them or to control them by means of magic formulæ. Hence arises the Magician or Shaman, termed *Halak* by the Central and Northern Sakai. Every man may be, to a certain extent, his own magician, and know what to do to avoid the spirits or to make them afraid of him; but the *Halak*, who possesses a familiar, is specially skilled in such matters, and can successfully get rid of spirits with which the layman would be unable to deal.

I was given the following description by a Sungkai Valley Sakai of the laying of a grave-ghost:—

"An evil spirit in the guise of the dead person (apparently not the actual soul or spirit of the deceased) haunts the grave. It has its face turned backwards on its body, while its eyes roll upwards till only the whites are visible. When an evil spirit of this kind catches hold of a human being the part touched withers. If the

*Anak Yang*¹ (familiar) of a *Halak* warns him in a dream that there is an evil spirit at a certain grave, they go together to the place, and, hiding behind a tree, watch the evil spirit feasting with the companions that he has called together. Now the evil spirit's companions are chiefly those whom the *Halak* has conquered and who are therefore afraid of him. After watching for some time, the *Halak* and his *Anak Yang* rush out; the latter seizes the spirit, while the *Halak* stabs it with a bamboo spear. When the *Halak* stabs the spirit, the other ghosts all vanish, being frightened of the *Halak*, whereupon the mouth of the grave opens and the spirit jumps into it, pursued by the *Anak Yang*. The spirit runs away into the earth. The *Halak* and the *Anak Yang* go to the corpse, and the *Halak* strokes its face to see that all is well. Then the bottom of the grave opens below them and they find their way to heaven (Malay, *surga*), passing over the bridge called *Menteg*. After this the *Halak* returns to earth by some unknown road. When he has got back to earth, he makes a medicine hut and decorates it with sweet-smelling flowers, *lebak* leaves, and long bamboo water-vessels ornamented with patterns and full of water. When night comes he performs magical rites, and then, in the early morning, the spirit that he wounded comes outside and hurls the spear with which he was stabbed through the wall of the hut. The *Halak* seizes the spear and goes to sleep: then whatever offerings the spirit asks of him in his dreams, such as rice coloured with turmeric² or soaked rice in the husk, he throws out of the hut into the jungle. The spirit takes the rice and throws back a few grains as a sign that he wishes to be friendly with the *Halak*. So, after this, the spirit becomes the *Halak's* friend, helps him to cure sick people, and aids him in other ways."

A *Halak* is frequently credited with the power of becoming a were-tiger. Hassan, an old Malay, who was living in the Ulu Sungkai at the time of my visit, declared that he had seen a *Halak* named Bekoh, who had died about five years before, grow a large pair of canine teeth. These at Bekoh's request he had taken hold of and shaken in order to prove that they were genuine! Some magicians are also said to be capable of splitting joints of bamboo without touching them, their familiars entering the bamboos and breaking them into halves.

By a Seriting Valley man I was given an account of how a magician, with the help of a familiar, called *Mambang*,³ regains the soul of a sick person, which has been seized by spirits. After describing the magician's ceremonial beehive hut in the jungle and the decorations of plaited leaves (*jari lipan*) which hang within it, he said "the *Mambang* lives on the hills, and the shadows of the *jari lipan* stretch out to the hill-tops and form a path for the *Mambang* to descend to the hut at the *Poyang's*⁴ (magician's) request. When the *Mambang* has come down into the hut,

¹ *Anak Yang* (Malay): lit. = child (or offspring) of the God, hence familiar spirit.—ED.

² Used also in Malay ceremonies.—ED.

³ *Mambang* (Malay) = divinity (usually an inferior deity).—ED.

⁴ Cp. Malay, *Pa'wang*.—ED.

the *Poyang* tells him to go and look for the soul of the sick man. The *Mambang*, obeying the *Poyang's* command, goes back to the hills by the road along which he came, and, when he reaches them, journeys to the houses of the evil spirits who live on the hill-tops. Outside these are the souls of many people hanging up in cages, and if he finds the soul for which he is looking, the sick man recovers; but if the evil spirit has carried the soul into his house, he is unable to release it and the sufferer dies."

While living on the Sungkai River among the Central Sakai (Senoi) in 1914, I was lucky enough to meet a *Halak* and to be able to get him to give a performance for my benefit. As an account of the proceedings may be of some interest, I give it below *in extenso*:—When stopping at Jeram Kawan, I arranged with Jahaia, the headman of the down-stream settlement called Ungkun, to hold a magical performance on the night of May 26th. I left Jeram Kawan by boat at about 3 p.m. and arrived at Jahaia's Kampong, where I was to sleep that night, some time before dark. Here I found the women busy cutting up and plaiting leaves, which were to form the ceremonial decorations, and getting ready the bamboo stampers with which an accompaniment is played to the *Halak's* chants. Jahaia was becomingly modest and said that he would do his best, though he could not claim to be a proper *Halak*, and only knew how to perform a little. Some time after dark, the sound of the bamboo stampers from a neighbouring house announced that the performance was about to begin. Making my way thither, and climbing up the tall ladder, I found the hut crowded by the inhabitants of the whole settlement, who were engaged in chattering, *sireh*-chewing, and slapping their bodies in order to obtain some relief from the swarms of sandflies which infested the village. The *Halak's* apparatus consisted of a circular frame of rattan cane, in diameter about four feet, with a marginal fringe of *bertam* leaves, cut into strips about three feet long. The frame was suspended at a distance of about four feet from the floor, the ends of the fringe thus being about a foot from it. The frame was held in position by three strips of tree-bark, which were attached to it at regular intervals, and were tied together to a roof-beam of the house. Close to the frame, and about five feet above it, was hung one of those trays for offerings (*anchak*), which are used both by Malays and aborigines. This was decorated with ceremonial hangings of cut and plaited leaves, and the scented inner bark of a certain tree. At the side of the hut was tied a sheaf of the large leaves of the *salak* palm (*Zalacca edulis*). Jahaia reserved his exhibition till late in the evening, and the first performer was a youth, who, I was given to understand, did not possess a familiar spirit, but hoped possibly to cultivate one in time. He wore a loin-cloth, and, on his head, a wreath of shredded leaves studded with flowers, which had a sort of ornamental brush of stiff foliage standing up from it at the back. Two garlands of cut leaves, on a foundation of tree-bark, were crossed over his chest and in his right hand he carried a switch of *lebak* leaves. He took up a squatting position on the floor within the circle of the

hangings attached to the rattan frame, while another young man, also wearing a wreath of flowers on his head, entered the circle as his assistant. When the hut had been plunged into semi-darkness by tying up *salak* leaves in front of a lamp of mine, which was hung near the door, the women, with a bamboo stamper in each of their hands, took their places behind a log of wood, which had been placed near one side of the hut. The young *Halak* then commenced a chant in a Sakai dialect, each line being taken up and repeated by his assistant, and an accompaniment played by the women with their stampers on the log of wood. Every time the *Halak* raised his voice he brought the switch of *lebak* (unidentified¹) leaves smartly down on the palm of his left hand and he also frequently flourished it over his right shoulder. The chant was, I understood, an invocation to an *Anak Yang* to come and obey his commands. Presently two or three other youths came and crouched under the circle of hanging leaves, those who could not get entirely inside it managing at any rate to squeeze in their heads and shoulders. After the performance had gone on for some time it was brought to a close, and Jahaia with a single assistant took his place within the circle. Jahaia having inherited his familiar spirit from his father, who had been a Malay-speaking Selangor aboriginal, proceeded to call upon it in Malay. His chant was taken up by his assistant and the women who were beating time with the stampers; and after a while a Sakai, who was squatting next to me, told me that the *Anak Yang* had arrived. Jahaia then stood up, and grasping the circular rattan frame in his hands, told it to dip towards me, which it immediately did—not a very wonderful thing, as he had hold of it on either side of his body. After this I left the hut, as it was 2 a.m. and I was told that the rest of the performance would be similar to that which had already taken place. I was unfortunately unable to catch sufficient of the invocation to be able to record it, but I heard “*mari ka-ujong jalan*” (come to the end of the path) frequently repeated, and, from what I could make out of the rest, it seemed to be a prayer to the *Anak Yang* to come to Jahaia. I left Ungkun early on the next morning, so that I had no opportunity of getting him to recite his spells to me again or taking them down.

Among the mixed tribes of the south the shaman's hut is typically a beehive-shaped structure of palm-leaves, which is sometimes raised from the ground on a bamboo platform. A specimen seen in the jungle while on a journey from the Ulu Langat (Selangor), via the Pahang boundary, to Kongkoi in Negri Sembilan is described in my notes on those districts as follows. “A very fine example of the *Poyang's* medicine-hut was seen in the jungle in the Ulu Langat. It consisted of a beehive hut of *bertam* leaves with a ‘crawl-in’ entrance, erected on a bamboo platform, so as to leave a small verandah in front. On this verandah were lying several bamboo stampers. Inside the hut, which had been abandoned, was sus-

¹ Not mentioned in Ridley's plant-list; possibly a short form of *kalibok* (= *kalibak*), a large wild *Ficus* (*F. Roxburghii*, Wall.; *Urticaceae*).—ED.

pended a tray of plaited bamboo decorated with hangings of fibre, bands of pandanus leaf decorations called '*tagah*' or '*jari lipan*,'¹ bunches of *lebak* leaves, and plaited ornaments known as *subang* (Mal. = ear-rings). On the floor was a grass whisk which the *Poyang* holds in his right hand, and swishes backwards and forwards when calling the spirits. My coolies (aborigines) remarked that only a big *Poyang* would have his hut so far from the village."

I subsequently saw other shamans' huts both in the Ulu Langat and also near the Kenaboi Mine²; but in these cases an incomplete beehive of *bertam* leaves had been erected within an ordinary hut of the village. The decorations in these beehives were of the same type as those seen in the jungle.

A trace of the beehive-hut persists also, I was told, among the Ulu Kampar Sakai in the form of a magic circle very similar to that which I have already described as in use by *Hulaks* on the Sungkai River.

Thunder and lightning are much dreaded by the Sakai, and spells are recited in order to drive away a threatening storm. Certain actions are, moreover, thought to bring about storms, among them being:—

1. To take a jungle-leech off the body and put it into the fire.
2. To put *malau* (a kind of resin) into the fire.
3. To tease a cat or dog in the house.
4. To tease a tame monkey, or dress it up like a man, and laugh at its antics.

This list was obtained from the Ulu Sungkai Sakai, but similar customs obtain in some other districts. In the Ulu Kampar, for instance, it is forbidden:

1. To roast an egg in the fire.
2. To laugh if a snake is met with in the jungle.
3. To pull a jungle-leech off the body and burn it.

In this district, when a bad thunder-storm comes on, the Sakai climb down from the house to the ground, strike their working-knives into the earth and leave them there. Hot stones from the hearth, the supports for cooking pots, are also thrown out of the door of the house. Both these actions are thought to be helpful in dispersing the storm, and the hot stones, symbolically at any rate, dry up the rain.

Should anyone in the house, for instance a child when playing, break off the tail of a lizard, each person cuts a piece of hair from his or her head, burns it in the fire, and then collecting the ashes blows them through the hands, placed trumpet-fashion before the mouth saying: "*Usah, usah gelebih!*" ("don't any more!"). If this was not done, the house would be struck by lightning.

¹ *Jari lipan* (Malay): lit. "Centipedes' feet"—a leaf-band furnished from end to end with pendulous fringes.—ED.

² Near Kongkoi.

Some thunder and lightning spells, which I collected in the Ulu Sungkai, are given below :—

- i. To try to stop a storm which has already begun, a man will call out "*Gar ingar*,¹ *eng sengoh*" ("Don't thunder (?), I am frightened").

- ii. For the same purpose :—

Poie sur ! Chong kajok !

Chong burbur !

Sur kinjok nor laut !

Go wind ! Creepers and rattans ! Go clouds to the sea !

- iii. For the same purpose :—

Brou gek-gek-gek !

S'lak berjut !

S'lak n'rik !

Srek asut !

Stop a little !

Leaves of the *berjut* ! (a kind of creeper).

Leaves of the *chapa* ! (*Blumea balsamifera*).

Stop (?) altogether ! (*Asut* means dry.)

- iv. *Lors patch-ge !*

Go back there. (The Malay, *Balik ka'sana*.)

After repeating the last spell the face is turned towards the direction from which the storm comes, the right hand is put in front of the mouth, trumpet-fashion, and blown through the hand ("*Puah*"), almost at the same moment being sharply moved away from the mouth in a horizontal direction, and the fingers opened.

- v. *Garoh, Garoh, Garoh !* (supposed to represent the sound of thunder).

Makoh menrit pek jadi !

I could not obtain a proper translation of this charm, but was told that *makoh* is "pregnant," *pek jadi* meaning, "Don't let it happen" (Malay, *jangan, jadi*).

Yok Pataling, an Ulu Sungkai Sakai told me that, if a child breaks the tabu with regard to teasing domestic animals, and a storm comes up soon afterwards, its mother cuts some hair from its head, wraps it in a piece of thatch, goes out of the house and places it on the ground, where she strikes it with a working-knife or a billet of wood. Up-country Sakai are also said to cut a piece of hair from a friend's head, place it on the ground, and strike it with a working-knife, whenever a thunder-storm overtakes them in the jungle. Some hot springs near Jeram Kawan on the

¹ There is a Malay word *ingar* (or *engar*) meaning "to make a noise."

Sungkai river are said to have arisen owing to the infraction of a storm-tabu by some Sakai many generations ago, and a Senoi told me the following legend about this:—Long ago a man, who had three wives—all sisters—lived on the present site of the hot springs. He was a *Halak*. One day he shot a *brok* or coconut monkey (*Macacus nemestrinus*) with his blow-pipe: he was just going to roast it when his father-in-law came to his house and seeing the monkey said: "If you really are a *Halak* don't roast that monkey, but bring it to life again." For a long time the *Halak* refused, but, as his father-in-law insisted, he at last pulled the poisoned dart out of the monkey and drew the venom from the wound with his fingers. The monkey having come to life again, they dressed him in coat and trousers and gave him a sword; then he danced on the ground outside the house. After a time the *Halak* wanted to stop the monkey dancing and said to his father-in-law, "that is enough"; but his father-in-law, who was very much amused, told him to let the game continue. When the performance had gone on for a little while longer, and the father-in-law, two of the *Halak's* wives and the people who had come together to see the sport were all laughing at the monkey, the *Halak* got ready his carrying-basket, and, going into the house to the wife of whom he was fondest, who had not gone outside to see the monkey dance or laughed at it, rubbed her between his hands so that she became a pebble, which he put into the carrying-basket. Then he lay down on his mat, as if he were going to sleep.

When his father-in-law, his two wives and the rest of the people stopped laughing at the monkey, there immediately arose a great thunderstorm, and as soon as this began, the *Halak*, taking his basket, came down from the house and went off into the jungle, leaving his other two wives, his father-in-law and the rest of the people behind him. Thereupon his house was struck by lightning and his father-in-law and the people who had come to watch the monkey were killed. As for the *Halak*, he fought the lightning, stabbing it with his spear, while his familiar spirit helped him by biting at it. At last the *Halak*, finding that he could not win the fight, ran off into the jungle and escaped. The two wives, whom the *Halak* had left behind at the house, were not struck by lightning and ran away to Bukit Ubai Baleh (The Hill of the Two Maidens). Here they saw something which looked like a big tree-root, but which was really a dragon; so plucking some *bertam* fruits, they put them on the "root" and cut them open with a knife. When they had done this they were immediately drawn in under the "root" (the dragon's body) and died. The dragon has now become a stone on the side of the hill, while the two wives' dresses of leaves have become smaller stones and lie near the dragon's body. (The hot springs, of course, welled up on the site of the *Halak's* house when it was struck by lightning).¹

¹ The "Orang Dusun" of the Tempassuk District of British North Borneo have a legend somewhat similar to this, and show a hill that they say was formerly a house, which, together with its inhabitants, was transformed into its present state because the people who lived in it dressed up a monkey and made fun of it.

Among some Sakai-Jakun aborigines, living on the Tekai River in Pahang, who had originally come from Salei above Pulau Tawar on the Pahang River, I found some curious beliefs with regard to natural phenomena. They told me that, according to their legends, an anteater holds up the sun and that when he curls his body round it night comes on, but when he unrolls himself the light is seen and day begins. Thunder, they say, is caused by a spirit called Nenek (Mal. = ancestor), who makes a noise in his armpits by banging his arms against his sides. He also makes the lightning by flashing about a thin board which is attached to a string (*i.e.*, a bull-roarer).¹

The occurrence of a lunar eclipse naturally causes a good deal of perturbation among the unsophisticated aborigines. In connection with this phenomenon, I was told a couple of legends which I give below, the second being, perhaps, complementary of the first. They were both obtained from the Sakai of the Ulu Sungkai.

LEGEND I.

The sun is angry with the moon because of an old quarrel. Formerly both the sun and the moon had many children, but the moon said to the sun, "Men cannot stand the heat of your children. If you will eat yours, I will eat mine." So the sun ate his children, but the moon hid hers (the stars) and, afterwards producing them, refused to carry out her part of the bargain. So that is why the sun is angry with the moon and fights her whenever they meet.

LEGEND II.

When the moon is quenched, it falls to the earth. Presently a *Halak* (magician)—always the same man—comes to the place where the moon has fallen to the earth and asks: "What are you doing there?" The moon replies: "I have fallen down. I came down to get food for my children, the stars. If you do not help me to get back again to the sky all you men upon the earth will die." "Wait," says the *Halak*, and, as it is night, he goes to sleep. While he is sleeping, his familiar spirit (*Anak Yang*) comes to him and says, "Help the moon to get back, or all men will die." "How can I help the moon to get back?" says the *Halak*; "I cannot do it." "Get ready a *bumbun* (a round medicine-hut), says the *Anak Yang*. So the *Halak* calls together his people, and they prepare the *bumbun* and make music-with-bamboo-stampers (*berchetog*) and perform-magical-rites (*berjualak*) there for seven days and seven nights, calling on the *Anak Yang* to help them to get the moon back to the sky. At the end of this time the *Anak Yang* puts the moon back again.

There would, however, seem to be yet another accepted explanation of the

¹ The bull-roarer is known to the east coast Malays.—Ed.

phenomenon, since I was also told by the man who gave me the legends that, when an eclipse occurs, the Sakai call out :

“ O, *Rahu*, *perjuk gecek jik !*
Jik mong kulit dunia ! ”

which he said meant :

O *Rahu*, give me back my moon !
 I am still upon the crust of the world !

It should be noted that *Rahu* is the moon-swallowing demon or dragon of Indian (and also of Malay and Siamese) mythology.

The aborigines of the Ulu Temengoh in Upper Perak say that, when the moon is eclipsed, it is being swallowed by an animal or spirit called *Pud*.

A curious belief, which I have so far not been able to refer definitely to any particular category, is widely spread both among the aborigines and the Malays. It concerns the evil which it is thought will befall anyone who goes out into the jungle with a craving unsatisfied. The Northern Sakai (Semang-Sakai) of the Temengoh and Kinta Valleys use a word *shalantap* or *shalentap*¹ in connexion with this belief and, as I have been able to obtain no exact translation of it, an example of its use may perhaps prove of interest. A Sakai of the Ulu Kinta, with whom I had been talking about this matter, having been given a couple of biscuits shortly afterwards, went round among his companions, who were squatting near my tent, and, chiefly, I think, with the idea of giving me a practical demonstration, broke off a bit for each man, saying as he gave it to him *shalantap*. Apart from greediness, I am inclined to believe that some idea of this kind may be the reason why, if one Sakai is given something to eat, all the others expect to receive a little too, even if they see that your stock of that particular article is almost exhausted.

Among the Central Sakai of the Ulu Sungkai I came across a case in which a man was thought to have met with an accident because of his neglect to chew betel-leaf (*sireh*) : he had wished to do this before going out, but, in his hurry, had put it off.

The man in question, Yok Dalam, fell from a tree, owing to a branch breaking, and was considerably bruised and shaken. I was told of his misfortune by one of his companions, and I asked what they had done for the patient, to which the friend replied that they had made a bed of leaves for him to lie on, so that he might rest until he had recovered a little, and had then taken repeated strides backwards and forwards over his body. On my enquiring the reason of this, my informant said that he did not know, except that it was customary to do so when a man fell from a tree, and that the action was supposed to help the patient to recover. To me,

¹ This interesting word would appear almost certainly to be an extended form of Malay *Santap*—high Malay for eat or “partake” (of food)—formed by inserting the infix “l.” Such forms, with infix, are frequently used in Peninsular magic.—ED.

however, it seems fairly obvious that it is exactly the reverse process to bringing bad luck on an object by stepping over it (*e.g.*, the Malays of Ijok in Perak think that if anyone steps over a fishing-rod left lying on the river-bank, no fish will be caught); for, if ill luck can be brought on anything by such an action, surely ill luck, which has already befallen a thing (or person), can be alleviated by doing that which in ordinary circumstances would be culpable.

But to return to the subject of beliefs with regard to unsatisfied cravings. The man who told me of Yok Dalam's accident said in Malay that he had *kēna punan* (or *kēna kēmpunan*); that is, as far as I can ascertain, got into trouble through going out with an unsatisfied craving. In Wilkinson's Malay Dictionary *kēmpunan* is given as meaning "a dilemma," but this does not give the whole meaning which the word conveys to the majority of Malays.¹ The "Orang Dusun" of British North Borneo have similar ideas, and apply the word *kopohunan* in the same sense as *kēmpunan*. When I first encountered these beliefs, I was inclined to think that *punan* was the name of an evil spirit, or at any rate the personification of all the evil that might befall people in the jungle, since some aborigines of Pertang in Negri Sembilan, by whom I was first made acquainted with these beliefs, told me that incense was burnt before starting on a journey, and that it was customary for the man who cooked for the rest in the jungle to burn a little incense each time that he prepared food; moreover, if a stranger passed when cooking was going on, he must take a little rice or water from the pot and call "Punan!" at the same time smearing the rice or water on the back of the neck or forearm. If Punan was not appeased, some calamity would be sure to happen: the person or persons who had failed to make the customary offerings would suffer from fever, or swellings in the groin, or would be bitten by snakes or centipedes. They further said that Punan stabbed those who had offended him (and thus caused their illness). A settlement of Serting River people of mixed Sakai-Jakun origin, who were living at Bahau, amplified the information that the Pertang aborigines had given me, saying that a man who cooked for his companions in the jungle would take some water from the pot in which rice was boiling and rub it on his forearm, which he then stretched out while calling "Punan! Punan! Punan!" It would seem, therefore, as if there was some idea that spirits or a spirit (Punan?) have something to do with the misfortunes which may occur to travellers, since offerings are not made without the suppliants having an idea of some being who requires propitiation. I have not since had any opportunity of questioning the Pertang or Serting River people more fully, but in

¹ The real meaning of the Malay *Kempunan* (as here used) certainly appears to be "to go craving," the full Malay form, *Ka-ampunan*, signifying to "ask pardon" [for leaving the table], as one has to do if one leaves in the middle of a meal. It would therefore easily come to mean "to go craving." The interruption of what (from a "magical" point of view) is a more or less religious ceremony explains the ill-luck. *Kopohunan* has a similar sense.—Ep.

the case of the Malays, I have absolutely failed, though I have questioned natives from several parts of the country, to obtain evidence that it is any definite spirit—or indeed a spirit at all—which causes the misfortunes to happen. It seems certain, however, that there must originally have been some belief of the kind. With regard to the actual meaning of the word *kěmpunan* I have not yet been able to get an exact translation from any Malay, while an attempt to do so always results in a long explanation such as that which I have given above.

Among the Sakai of the Sungkai River and of the Ulu Kinta, if not among other tribes, certain food is forbidden to, or eschewed by, the women. In the former district I was given the following list of animals, the flesh of which the womenfolk did not eat:—

The *Sěladang* (*Bos gaurus*).

The *Brok* monkey (*Macacus nemestrinus*).

The *Měnturun raya* or *Běnturong* (*Arctictis binturong*).

The *Rusa* (*Cervus unicolor*).

In the case of the last, I was told that women and children may not eat, cook, or touch deer's flesh, or go near the body of a dead deer. The flesh of elephants, I was informed, was interdicted to both men and women. In the Ulu Kinta I was told that women were not supposed to eat the flesh of the Muntjac, of the species of tortoise called *Baning* by the Malays, of the Mouse-deer, of the *Rusa* (prohibition not observed by all women), or of the fowl.

Among the Sakai of the Ulu Kinta, at any rate, I fancy that the tabu are not very strictly observed, for, after the above information had been given to me, I actually saw a woman eating deer's flesh. On my asking why she did this, if it was prohibited, she replied that some women were afraid to eat it, others not.

The reason given in both districts for the prohibitions was that women who dared to eat the articles specified would suffer from convulsions (the Malay word *sawan* was used). In the Ulu Kinta it was supposed that the convulsions might afflict either a woman or her children. Among the Hill Sakai of Upper Perak, too, the *Rusa*, the Muntjac, and the wild pig are not eaten by women, as being likely to cause sickness either in themselves or in their children. Double bananas are not eaten by the women in the Ulu Kinta, as it is thought that a woman who eats one will give birth to twins, which are apparently not welcome, because, the Sakai said, one of them always dies.

The prohibition with regard to mentioning the names of near relations, either by blood or marriage, so common in the Malayan region, is also found among some of the mixed Negrito-Sakai and Sakai-Jakun tribes, and also among the Sakai proper. A man of a Sakai-Jakun tribe, which was living close to Kuala Tembeling in Pahang, told me that they were forbidden to mention the names of fathers-in-law, mothers-in-law, brothers-in-law, or sisters-in-law; while a man from near Pertang

in Jelebu, Negri Sembilan, said that his people did not dare to mention the names of their fathers, because they were afraid of being struck by the indwelling power (*daulat*) of that relation. Among the Hill Sakai of Upper Perak I was informed that avoidance of the mother-in-law was strictly observed, and that it was not allowable to speak to her directly, to pass in front of her, or even to hand her anything. Among these people there seems also to be a certain prejudice against a person mentioning his own name.

Concerning Sakai ideas of an existence after death, I have never been able to obtain any very great amount of information. The story, which I have given above, with regard to the soul's passing to a heaven, may or may not be truly aboriginal; but it seems, at any rate, to be fairly clear that the Sakai and the tribes of mixed Sakai-Jakun or Negrito-Sakai origin do believe in the existence of a soul after death, from the mere fact that food and other offerings are so commonly placed on the grave. In the case of the Kinta Valley Sakai I was told very decidedly that the broken objects, so disposed of, were intended for the use of the dead person's spirit, though in the Ulu Sungkai it was said that a spirit in the shape of the dead person (not his or her actual soul or spirit) haunted the grave (see above). In the latter case I cannot help thinking that there may be some confusion of ideas. My informant told me that for the first five days after burial, food is placed on the grave regularly, while for six days numbers of evil spirits collect there and feast. For this reason children are not allowed to go out after dark during the whole of that time. The spirits of the dead are much feared by most primitive peoples, and I think that perhaps the idea that the spirit at the grave was not really that of the friend or relative may have been a later addition. Among the Sakai of the Kerbou Valley, and of the Ulu Kinta in Perak, a death necessitates the desertion of a settlement, and I have, on more than one occasion, passed houses and clearings abandoned for this reason. It seems to me that very likely this may be due to fear of the dead person's ghost; but, on the other hand, it may be thought that the locality where somebody has died was previously unlucky and spirit-haunted, for if not, the death would not have occurred.

The Kampar Sakai said that articles of property, not necessarily belonging to the deceased, and food, are placed on a newly-made grave, and that a fire is kindled there morning and evening for the first six days after burial. The Ulu Kinta aborigines told me that they placed food (in addition to the objects already mentioned) on a grave, and lit a fire at it for the first seven mornings. The body was buried with the head pointing in the direction in which it lay when death occurred, and the grave dug to a depth of about a foot more than that of a sitting figure, in order that the corpse might be able to sit up. The hole was covered in with a roofing, and the earth from the excavation piled up on the top of this, the mound so formed being crowned with some sort of a small hut.

From the Sakai-Jakun of the Tekai River, already mentioned, I got some rather

interesting details about their beliefs in connexion with death. I was told that the souls of the dead became white butterflies,¹ and that, for this reason, it was forbidden to kill insects of this kind. Among these people also, it seems, a settlement is deserted if a member of it dies. They said they did not bury a corpse, but left it in the abandoned house, for if they put a body into a grave, the spirit would not be able to make its escape upwards.

The under-world, according to one of their legends, is ruled over by an old woman called Arud, whose playthings are dragons, one of which, her special pet, sits close to her. Her house is made out of the bones of men who have died upon the earth. Their ribs form its floor and their leg-bones the posts, while she uses their skulls as water-vessels. When she has reached the extreme limits of old age she becomes young again.

Before bringing this paper to a close I may, perhaps, make a few remarks with regard to the various terms which are applied to the aborigines by Europeans or by the Malays. The latter may speak of any of the aborigines as Sakai; the word, especially as used in old Malay romances, often signifying nothing more than followers or dependents of a Raja. The Malays, who treat the aborigines with great contempt, use this word² in speaking of them, so that the latter have in many cases come to look upon it as an opprobrious epithet. The Jakuns (Proto-Malays and Leiotrichi) and the people known to anthropologists as Sakai (Cymotrichi), therefore, dislike the name and generally are pleased if called *Orang Sahabat* or *Sabat* (Friends), *Orang Darat* (Landsmen), or *Orang Bukit* (Hill Folk). On the other hand, the Negritos of the western side of the Peninsula are by no means averse from being termed Sakai, since they seem somehow to have got into their heads that the term Sakai denotes their lighter-coloured neighbours: hence Negrito tribes acknowledge such names as Sakai Jehēr, Sakai Jeram, etc., which have been bestowed on them by the Malays. The term Semang, much used by anthropologists as a designation for the Western Negritos, is really very little heard in the districts where they live, especially among the Negritos themselves, since the word seems to convey to these aborigines a picture of a little, low-class, black people with curly hair, which their feelings of pride would not let them admit that they were. The Eastern Negritos are both by Malays and European scientists often spoken of as *Orang Pangan*.

In collecting together these notes on customs and beliefs of some of the aboriginal tribes that I have visited, many points have occurred to me which require further elucidation, and these I hope to be able to deal with in the future, should opportunity offer. In working among the aborigines of the Peninsula I have been

¹ Souls of the dead become white butterflies. This is similar to the Burmese belief and is probably, therefore, Indo-Chinese.—Ed.

² "*Orang Sakai*" in this sense might be translated "the subject peoples."

hampered by several circumstances ; firstly, the timidity, reticence, or stupidity of the tribesmen ; secondly, the fact that in no case have I been able to spend more than some four or five weeks (often much less) in the neighbourhood of, or in contact with, any one group ; for in an expedition of a month's duration a week or more may be spent in travelling ; and thirdly, that opportunities have not presented themselves for revisiting old ground with a view to clearing up doubtful points. It must be also remembered that it is difficult to find a Sakai who will, or can, fix his attention on any one subject for more than a very few minutes at a time ; hence it is necessary, after talking about anything for a little while, to let the matter drop and return to it later. To question an aboriginal, especially a member of one of the wilder tribes, minutely and elaborately, usually only results in the visible distress and confusion of the savage.

THE TWO-HANDED CLUBS OF THE MAORIS.

[WITH PLATE XVI.]

By H. D. SKINNER.

I.—NEW ZEALAND TYPES.

Nos. 1, 2, and 3 of Plate XVI represent three characteristic kinds of Maori weapon. No. 1 represents a *hani*, or, as it is called in Taranaki, a *taiaha*. No. 2 is a *tewhatewha*. No. 3 is called *pouwhenua*. It is the purpose of this paper to show that, though the three types differ markedly in appearance, genetically they are closely connected. As will be seen below, *hani*, *tewhatewha* and *pouwhenua* are all light elongated clubs, each of them having a blade with a sharp edge or edges, a grip below which is a band of carving representing two human faces, and a sharp point used for in-fighting.

Hani.

The *hani* is often, though quite wrongly, called a spear, while it is sometimes less incorrectly described as a two-handed sword. "In many instances," says Hamilton,¹ "it was used as a token or symbol of authority, as in the case when Rewi delivered to Ngata the *taiaha* known as *Mahuta*, as his warrant or authority to prevent, or, if necessary, kill, any European crossing the *aukati* or boundary line surrounding the so-called 'King Country.' "

The *hani* of Fig. 1 (Pl. XVI) is 1829 mm. (72 inches) long, the greatest width of the blade being 89 mm. (3½ inches). In actual fighting it is grasped by both hands just above the carving, the point being directed downwards. The blow is delivered with either edge of the blade, both being sharp. In No. 1 the carving at the lower end (Plate XVI, No. 4) has been boldly designed and finely executed with stone tools. The point represents a human tongue ornamented with scrolls. Above it are the teeth and upper lip, above which may be seen a diminutive nose, eyes obliquely set and inlaid with circles of shell, and a beetling brow with conventional forelock. This carving is repeated on the reverse side. Above the carving is a band, some 6 inches wide, of scarlet *kaka* feathers, surmounted by a circlet of cream-coloured dog's hair. Above the decoration rises the long blade, beautifully polished and having both its edges sharp. The end of the blade, where it is widest, is generally shaped in a curve, but it occasionally takes the shape of an obtuse angle. The feathers used in such decorative bands as that just mentioned were almost invariably the scarlet feathers from beneath the wings of the *kaka* (*Nestor meridionalis*), and several birds, perhaps a dozen, were required for the decoration of one *hani*. The first step in applying to the *hani* this piece of decoration was the plaiting

of a foundation of flax fibre, of which Fig. 1 is an example. On this foundation the scarlet *kaka* feathers were plaited so evenly that their surface was as smooth as a bird's breast. The hair of the circle previously mentioned was cut from the tails of native dogs and tied in little tassels with binding of dressed flax. The flax tags of these tassels were then plaited into a cord, along which the tassels hung at regular intervals, as indicated in Fig. 2. The whole cord was then wound round the *hani* a number of times, completing the decoration as in No. 1, Plate XVI.

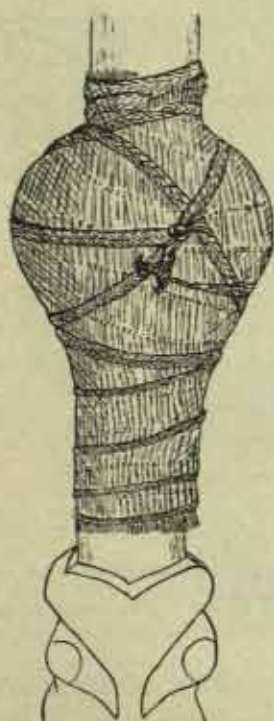


FIG. 1.—PLAITED FOUNDATION FOR FEATHERWORK OF *hani*.



FIG. 3.—PART OF PATTERN CARVED ON BLADE OF *hani* (Plate XVI (1)).

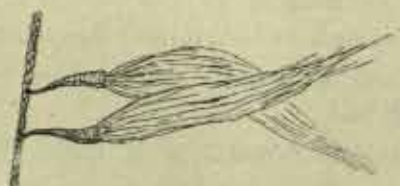


FIG. 2.—CORD OF FLAX, TASSELS OF DOGS' HAIR.

Variations in type of Hani.—Though *hani* vary little in type they vary much in size. The smaller and the more delicate specimens were used only on ceremonial occasions, and then generally as adjuncts of the orator. Specimens made of whalebone may sometimes be seen in museums. There are in collections a good many wooden specimens in which the whole blade is decorated with scroll carving, but the writer has never seen an old example of this kind: the carving, if executed on the grip, would impair the fighting value of the weapon. An exception must, however, be made in the case of the *hani*, No. 1, Plate XVI, on which, near the widest part of the blade, is the carving represented by Fig. 3. The carving is undoubtedly old, some of it being almost obliterated by long use. It is unlike the typical Maori scrolls of No. 4, Plate XVI, and calls to mind the rectilinear designs of Central Polynesia, the motif of which is plait or woven-work. Another variation which should be note

occurs in Fig. 4, D. The tongue is almost invariably decorated with scrolls, but in this case a rectilinear design has been used which, like the last figure, recalls the plait-work patterns of Western and Central Polynesia. Unfortunately, the locality in New Zealand from which this specimen was collected has not been recorded.

Mr. Henry Balfour has figured two other variations in this region of the *hani* (Fig. 4). "a" is typical; "c" has lost the features of the face by a process² of

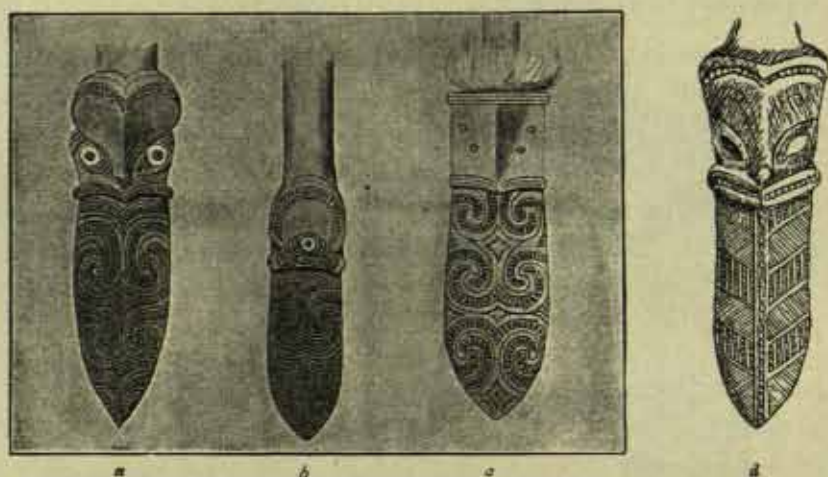


FIG. 4.—CARVING ON *hani*.

degeneration; while in "b" the features of the two faces, obverse and reverse, from the lips upwards have been rotated through 90 degrees, so that we now have two faces in profile, back to back, the single eye serving for both faces. The tongue, however, remains full-face.

Geographical Distribution of Hani.—The determination of the geographical distribution of the *hani* in pre-European times presents difficulties. In the North Island it appears to have been universal, and Webber's drawings show that it occurred in the typical form in the north of the South Island. As the material culture of the South Island, while differing in some respects from that of the North, appears to have been fairly homogeneous in itself, it is to be supposed that the *hani* was universal in the South Island also. There is no evidence of its occurrence at Chatham Island.

The carving on the points of *hani* shows a general similarity in design, but there is much variation in detail. These variations in details of design could probably be arranged in groups which would correspond to definite geographical areas, though the localities from which specimens were collected have so rarely been recorded that the task would be one of some difficulty.

Tewhatewha.

No. 2, Plate XVI, represents a *tewhatewha*. Its length is about 45 inches. In fighting it is grasped just above the band of carving towards the pointed end, and this latter, as in the case of the *hani*, is pointed downwards. The blow is delivered

with the straight sharp edge, to which the axe-like expansion acts merely as a make-weight. The pointed end is used, like that of the *hani*, or the bayonet in "shorten arms," to deal with an opponent who has got within the guard. The narrow band

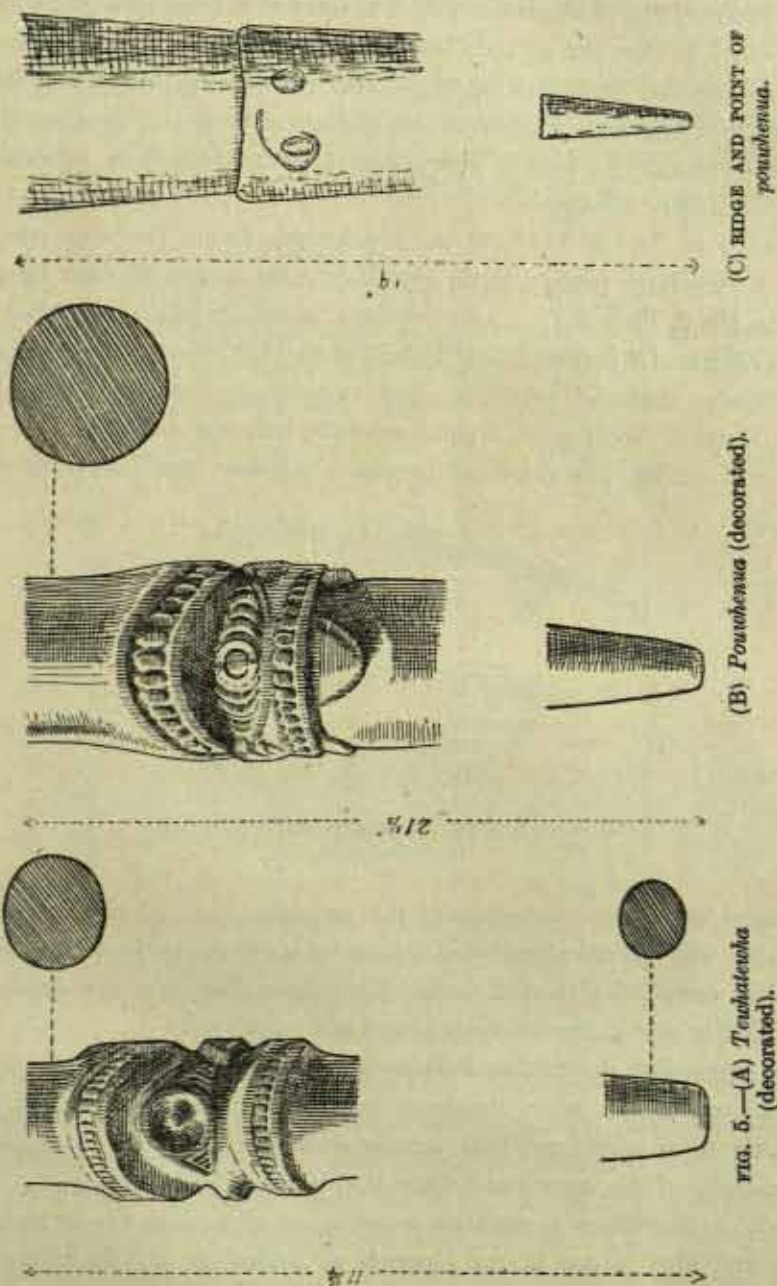


FIG. 5.—(A) *Teuhatawha*
(decorated).

of carving towards the pointed end (Fig. 5, A) represents two human faces facing outwards. The single circle serves for the eye of both profiles. There is the same diminutive nose, upper lip, and teeth, as in No. 4, Fig. 1. The tongue is uncarved and longer, but the chief difference is that the faces have been rotated through

90 degrees and are now in profile. In this respect the carving resembles *b* in Fig. 4, where the upper features of the faces have been rotated in a similar way. Where the axe-like expansion joins the blade a bunch of feathers hangs from a small hole. To produce one of these the Taranaki method is to strip a single vane from the quill, which is then cut so that blocks of it are left attached to the remaining vane at small regular intervals (Fig. 6). These vanes are then tied with binding of dressed flax in a large bunch which is tied to the *tewhatewha*. The same method of treating feathers may be seen in specimens of featherwork from various parts of the Pacific, including Melanesia.

Variations in Type of Tewhatewha.—*Tewhatewha* do not vary as much in size as *do hani*. A very large proportion do not differ in measurements more than an inch or two from No. 2, Plate XVI. An exceptional specimen in the Liverpool Museum measures 1778 mm. (70 inches) in length and 305 mm. (12 inches) across the expansion. Small specimens made of whalebone are occasionally seen, and there is in the Dominion Museum, Wellington, a small example from the Auckland District made of greenstone. This, like the small ones of whalebone, can have been used only

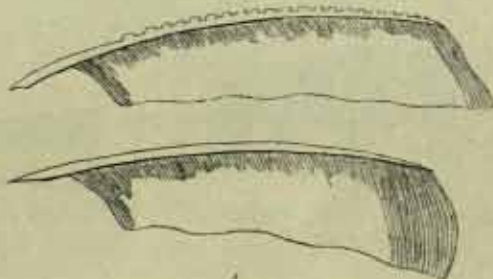


FIG. 6.—FEATHERS PREPARED FOR DECORATION OF *tewhatewha*.

on ceremonial occasions. Occasionally the expansion, and more rarely the blade, are decorated with carved spirals, but I know of no examples in which this carving has not been executed with steel tools. Such decoration does not appear to have been recorded in any of the drawings of the early navigators.

In the engravings illustrating Parkinson's account of Cook's first voyage to New Zealand the *tewhatewha*, when shown, is invariably given an expansion unusually wide with its upper edge more than usually concave (Fig. 7, A). Hamilton¹ notes several examples of this variety and states that it is an "older form."

Fig. 7, B, illustrates a variation noted in an example in the British Museum collection, and also in one in the Museum of Ethnology at Cambridge. In this variety, which is probably local, the part of the club which corresponds to the blade of the *hani* is differentiated by a slight ridge from the axe-like expansion.

Fig. 7, C, which represents a *tewhatewha* in the Pitt-Rivers Museum, Oxford,

¹ *Maori Art*, p. 183.

may be a "sport" or it may possibly represent a further advance in evolution from the variety just figured.¹

Fig. 7, D, represents a *tewhatewha* dug up in the course of excavations near the town of Nelson, in the north of the South Island. The absence of carving may possibly indicate that this example is unfinished.

Geographical Distribution of Tewhatewha.—*Tewhatewha* appear to have been universal in the North Island. As in the case of *hani*, the evidence relating to the South Island is much more scanty, but it seems probable that they were universal there also. There is no evidence for or against their occurrence at Chatham Island.

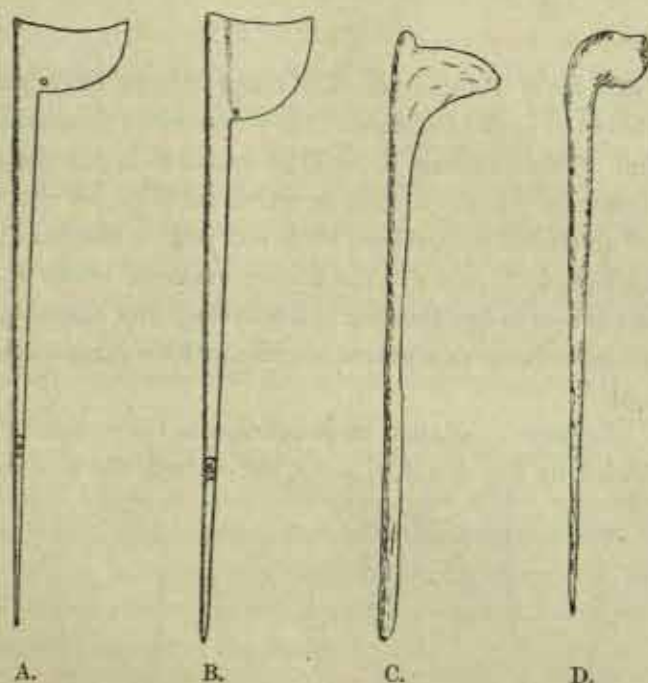


FIG. 7.—TYPES OF *tewhatewha*.

Pouwhenua.

No. 3, Plate XVI, represents a *pouwhenua*. This example is 60 inches in length, and the maximum width of the blade is 127 mm. (5 inches). In fighting, it is grasped above the carving, and the blow is delivered, as in the case of the *hani*, with either edge of the blade. The point is used, as in the case of *hani* and *tewhatewha*, for in-fighting. Hamilton's statement² that *hani* and *pouwhenua* correspond almost exactly in shape, with the exception of the carved tongue, is not strictly accurate,

¹ The point is blunt, and does not seem ever to have been sharpened. It is an aberrant form, and may not be from New Zealand at all. Chatham Island suggests itself as a possible locality.

² *Maori Art*. Wellington, 1901, p. 183.

for the blade of the *pouwhenua* is almost invariably wider. The outline of the end of the blade also shows a distinct tendency to vary, as will be explained later. The carving of this specimen is shown in Fig. 5, B, and differs hardly at all from that of the *techatewha* (Fig. 5, A).

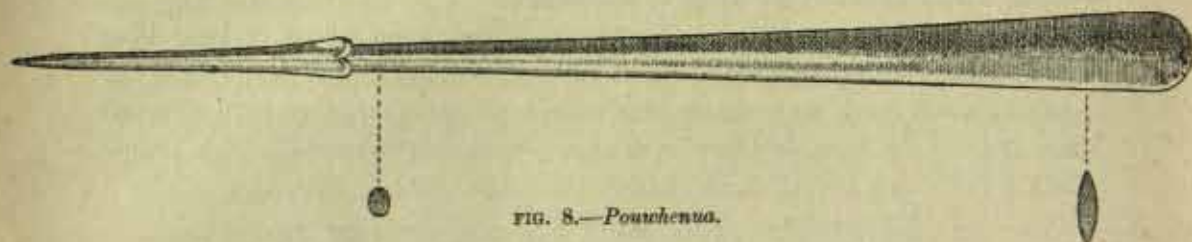


FIG. 8.—*Pouwhenua*.

Variations in Type of Pouwhenua.—The material from which *pouwhenua* were made appears always to have been wood. They were never decorated with feather-work of any kind. There appears to be little variation in the design of the two carved human faces, but examples occur in which the faces are omitted altogether and the region of differentiation between blade and point is marked by a ridge only, as is the case in Figs. 5, C, and 8. The former example, which was collected by Captain Cook and is now in the Museum of Archaeology and Ethnology, Cambridge, represents the primitive form, as is proved by clubs with the same ancestry from other parts of the Pacific.¹

The region of greatest variation in *pouwhenua* is the extremity of the blade. This, as is indicated by Fig. 9, *a*, *b*, *c*, and *d*, varies from flat to a strongly marked

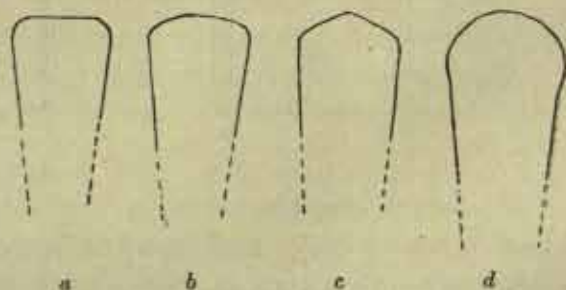


FIG. 9.—ENDS OF BLADES OF *pouwhenua*.

curve. Examples generally conform closely to one or other of the four forms set out, and intermediate stages are extremely rare. The almost universal failure to preserve the locality of specimens, a failing which must be laid to the charge of all early collectors, renders it impossible at present to prove that these well-marked variations are local. I believe, however, that this was the case.

Geographical Distribution of Pouwhenua.—This type of weapon appears to have been universal in the North Island. The evidence as to its occurrence in the South

¹ Two eyes have been roughly sketched below the ridge, indicating the association of this region with the human face.

Island is less complete, but as it has been recorded in the Dusky Sound,¹ the most remote of all South Island Districts, we may suppose that it was universal in that island also. It probably occurred at Chatham Island also, as it seems to be referred to by the unknown journalist on board the armed tender "Chatham" after which the island was named. "Some of the spears were very long, and pointed only at one end, without much neatness."² Broughton refers³ to spears "about six feet in length, one or two of them were new, with carved work towards the handle." It seems likely that these two accounts refer to weapons of the *pouwhenua* type.

Summary.

The battle-practice of the three types of club has not been described, as this paper is concerned with morphological rather than with functional characteristics. The principal guards of the *hani* are figured in the illustrations to the unpublished portion of John White's *Ancient History of the Maori*. Among the Taranaki Maoris the methods of handling *hani* and *tewhatewha* are very similar, though the differences in weight and balance result in differences of thrust and guard. I have not seen the *pouwhenua* in use, but it is unlikely that its practice differs materially from that of the *hani*.

All three are to be regarded as light, elongated clubs having a blade which merges into a grip, and a point which, in the case of *hani*, is invariably decorated with carving but in the other two types is always plain. The lower extremity of the grip is always marked by a ridge which is almost invariably decorated with two human faces. In one of the oldest examples figured, however, this decoration was absent, and this absence is, as will be indicated later, a primitive character. It will be seen that all three types exhibit a strong family likeness the explanation of which is indicated by evidence from other parts of the Pacific.

II.—WESTERN AND CENTRAL PACIFIC TYPES.

The island group of the Solomons possesses a decorative art which, though in general widely separated from that of New Zealand, yet in some respects is closely related to it. The elucidation of this relationship has not yet been attempted, but it seems clear that, as Balfour has already indicated in the case of Easter Island,⁴ the relationship of Maori art to that of the Solomons is filial. Other strains have

¹ Hawkesworth, Plate 53. Hamilton (*Maori Art*, p. 40) calls the object held by the man a paddle, and compares it with a paddle in the Hocken collection, the blade of which is similar in shape. The length of the latter, however, is much greater. It seems simpler and more probable to suppose that the man is holding a *pouwhenua*.

² McNab, *Historical Records of New Zealand*, Vol. II, p. 506.

³ G. Vancouver, *A Voyage Round the World*. London, 1797. Vol. I, p. 88.

⁴ *Folk-Lore*, December, 1917, p. 356.

entered into the composition of Maori art, but some of its most striking features can be explained only when the simpler and relatively more primitive data of the Solomon Islands have been adduced for comparison. Among these features are the bird-headed human figure called *manaia*, the double spiral shaped like an elongated S, and the bone-boxes of northern New Zealand. It is not surprising, therefore, that in the same group evidence exists which throws light on the origin and relationship of the group of Maori weapons we have been examining.

Fig. 10 represents one of the well-known paddle clubs of the Solomon Islands. Its close relationship to the paddles of that region is evident, but its decoration of plaited or woven work, its high polish, and its exact symmetry when seen in profile, prove that it was not designed to propel a canoe. It should be noted that this club exhibits all the essential characteristics of the group of Maori weapons already described, namely, a blade which merges into a grip, a ridge which marks the point of differentiation between grip and point, and a point. If a collection of these Solomon Island clubs is examined, it will be seen that the paddle character of the blade progressively disappears, the shape becoming like that of Fig. 11. In this specimen the point has been broken off just above the ridge, and the grip has been roughly sharpened to replace it. The raised mid-rib is a vestigial character pointing back to the paddle ancestor. Fig. 12 resembles more closely still the shape of the *pouwhenua*, though its shortness renders unnecessary any special development of the point for in-fighting. The grip is improved by a wrapping of split cane which hides the ridge marking the end of the grip.

Among the paddle-clubs of the Solomons there is a tendency which may frequently be noted towards curving the point of the blade away from the striking edge so that the club is shortened without being lessened in weight. This modification, which is illustrated by Fig. 13, would make the club more compact and handy, but would entail the disadvantage of a striking-edge which curves away from the opponent.

This same tendency towards curving the blade of a paddle-club is very clearly exemplified in the Niué Island club of Fig. 14. In this example the mid-rib is very fully developed. The blade merges imperceptibly into the grip, and the point is strongly differentiated by a circular ridge. Of a closely related type is Fig. 15, in which, however, the outline of the end of the blade has departed far from the primitive shape and recalls the paddle forms of the Marquesas in Eastern Polynesia. On the point is carved a design the motif of which is woven or braided work. Fig. 16 represents the grip and point of a similar club in which the grip is improved by a cord of closely woven human hair, recalling the split cane of Fig. 12. A design similar to that of the last example is carved on the point. Examples occur in which the decoration at the grip is woven in the same way as in the paddle-clubs of the Solomons, and there are sometimes shells attached as well.

Fig. 17 represents another and much shorter type of club also from Niué. The

point and grip are of the ordinary type. But while one side of the blade curves off in the same way as that of Figs. 13 and 14, the other side has been straightened. Thus the defect previously noted, whereby the opponent is struck at with an edge which curves away from him, is remedied.

The type just figured undoubtedly stands close to the ancestral line of the Maori *tewhatewha*. It has characteristics which ally it closely to the paddle-clubs

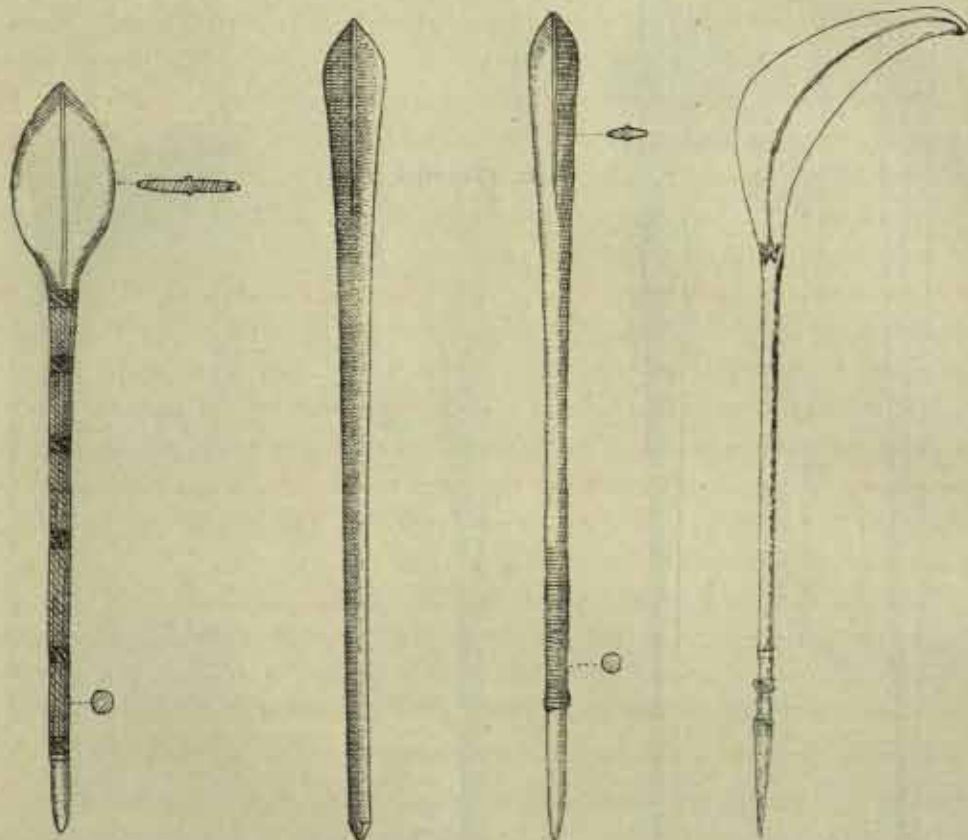


FIG. 10.—SOLOMON ISLANDS PADDLE-CLUB.

FIG. 11.—SOLOMON ISLANDS PADDLE-CLUB.

FIG. 12.—SOLOMON ISLANDS PADDLE-CLUB.

FIG. 13.—SOLOMON ISLANDS PADDLE-CLUB WITH CURVED BLADE.

of Niué, but is there no other strain in its parentage? Fig. 18, which represents a club from Anaiteum in the New Hebrides, supplies the second element in the ancestry of Fig. 14. Though the expansion of this club—we cannot speak of so specialised a feature as a blade in so lowly a type—shows already two characteristics of that variety of *tewhatewha* (Fig. 7, A) which Hamilton called an “older form,” yet it belongs to a far more primitive type of club than any yet figured. It is not far from the original sapling trunk, which is the simplest of all clubs. Indeed, the expansion shows every sign of being shaped from a buttress of the parent tree.

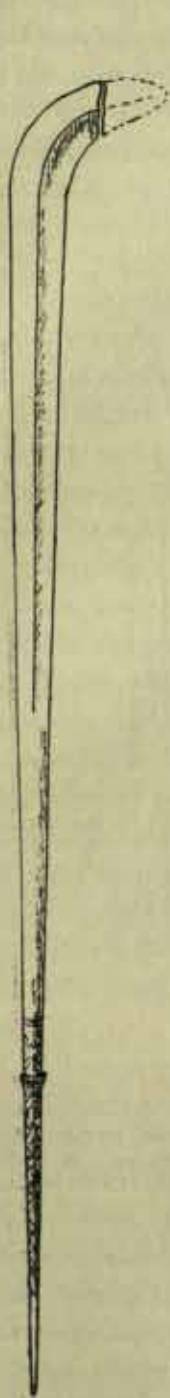


FIG. 14.—NIUE CLUB WITH CURVED BLADE.



FIG. 15.—NIUE CLUB.



FIG. 17.—NIUE CLUB.



FIG. 16.—POINT, RIDGE, AND GRIP OF NIUE CLUB.



FIG. 18.—ANAITEUM CLUB.

III.—CONCLUSION.

All students of Maori art agree that it contains a strong, possibly a predominant, Melanesian element. This conclusion is supported by evidence of an entirely different kind, for Mr. S. Percy Smith, the greatest authority on the traditions of Polynesia in general and of New Zealand in particular, has stated that the earliest wave of

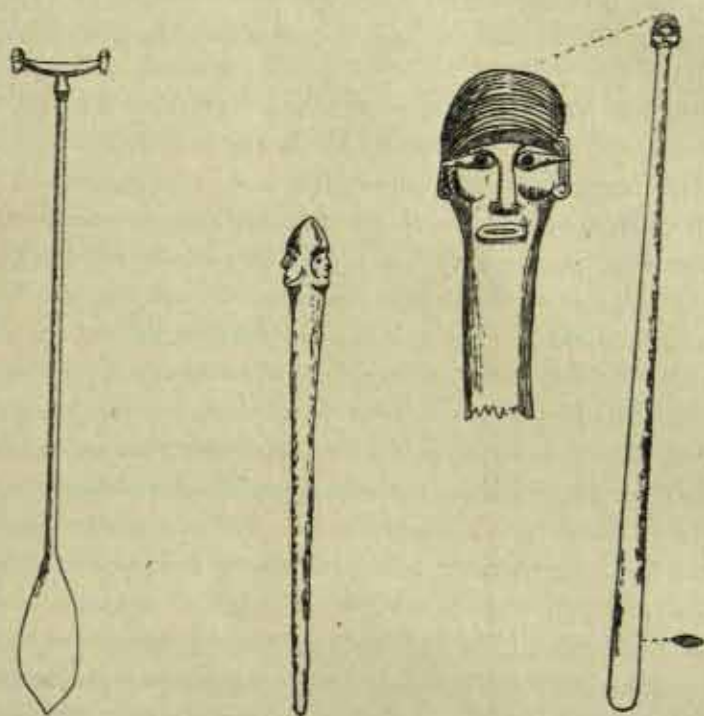


FIG. 19.—SOLOMON ISLANDS PADDLE.

FIG. 20.—SOLOMON ISLANDS LIME SPOON.

FIG. 21.—EASTER ISLANDS CLUB.

migration to reach New Zealand came from the Western Pacific and that the individuals who composed it were comparable racially with the natives of Niué. He says:¹

"At the close of the tenth or beginning of the eleventh century, there flourished in Eastern Polynesia a notable example of the bold Polynesian navigator, named Kupe . . . He equipped two large canoes, and, sailing from Rarotonga 'in the direction of the sunset, in the month of February,' he made the land near the North Cape of New Zealand, and thus became its discoverer. . . . After Kupe had returned to Tahiti—but how long after we do not know, though probably within a hundred years—another expedition—a fleet of six canoes—landed on the shores of New Zealand near the Sugar

¹ S. Percy Smith, "Discovery of the Chatham Islands." *Church Gazette of the Anglican Diocese of Auckland, New Zealand.* January 1st, 1918, p. 5.

Loaf Islands, New Plymouth. These people, so far as can be judged by the description of them handed down, were not pure Polynesians, as were the Eastern Islanders, but had much Melanesian blood in them, and differed in many respects from the Maori in customs, habits, etc. At the same time it is clear, from a few of their place-names and words of their language that have come down to us, that they spoke a dialect of Polynesian, and the probability is that they came from the Western Pacific, and were akin to the Niué islanders."

These people, in Mr. Smith's view, were the earliest stratum in the population of New Zealand, and are represented by the Morioris of Chatham Islands.

It will be seen, therefore, that not only is there no improbability in connecting the group of Maori clubs already described with forms which occur in the Niué and in Melanesia, but there are even *a priori* grounds for expecting related forms to occur in those parts of the Pacific. It is not claimed that the types figured are actually ancestral forms. But it is believed that, though not ancestral, they stand in some respects closer to the ancestral forms than do any of the New Zealand group, and that they thus enable us to form a fairly accurate judgment as to the course that evolution has followed in producing *hani*, *teuhatewha*, and *pouwhenua*.

Of the three the *pouwhenua* is the least specialised, and hence the most primitive, type. The evidence for its occurrence in every part of the New Zealand group and at the Chathams is much more satisfactory than that of either of the other forms. Its least primitive character is the length of the point, a character shared also by the *teuhatewha*. The increased length and weight of the blade, as compared with the paddle-club of the Solomons, rendered necessary the development of some feature adapted to in-fighting, and it seems probable that the point developed in response to this need. The shortness of the point of the *hani* may, conversely, be regarded as primitive, and it is probably by way of balance that the blade of the *hani* is narrower and hence lighter than that of the *pouwhenua*. The woven-work motif of the decoration on the point of Fig. 16 may perhaps be significant of ancestry when compared with the similar motif of Fig. 4, *d*.¹ More significant is the plaited cord from which the tassels hang, which finds an exact parallel in Niué (Fig. 16), and the rectilinear design on the *hani* blade (Fig. 3), which, in the writer's opinion is the lineal though degenerate descendant of the woven-work of Niué and the Solomons.

The problem of the origin of the human face design which is common to *hani*, *teuhatewha*, and *pouwhenua*, involves several points of interest, only one of which can be dealt with here. In the Solomon group, as in New Zealand, two motifs occur in the decoration of the top of the paddle handle, namely a bird's head, and either

¹ I attach little weight to this, however, as the whole design of Fig. 4, *d*, may have been transferred from the carved *potuki*, or wooden spatulate clubs, the outline of which is similar to that of the *hani* tongue.

one or two human heads. The former of these motifs does not fall within the scope of this paper. The latter is exemplified by Fig. 19, which represents a paddle from the Solomon Islands. I am not able to figure a paddle in which the two faces are carved on the two surfaces of a paddle handle, but Fig. 20, a lime spoon from the same group, shows that such a version does occur in the art of this region. The human face motif in paddle handles occurs frequently in the islands to the north of the Solomons, but appears to be absent from Southern Melanesia and from Polynesia with the exception of New Zealand. The difference between the motif of Fig. 20 and that of Fig. 5, B, is no more than the difference between a semi-naturalistic and a conventional rendering of the same subject.

From the facts already set out in this paper it seems probable that the process by which *hani* and *pouhenua* have attained their present form is very different from that which has resulted in the *tewhatewha*. In the former case the process appears to have been a gradual one, strictly comparable to the process of evolution as conceived by Darwin: a gradual accumulation of minute differences resulting in two widely divergent types. The *tewhatewha*, on the other hand, appears to be a hybrid, owing its characters to two parents which are specifically distinct. Such a process of hybridisation, a process extremely common in savage art, is well exemplified in the case of the Maori *hei-tiki*, in which the proportions of an adze have been imposed on a human figure¹ worn as a pendant. Thus the sterility which exists between two individuals of different biological species finds no counterpart in the development of art, for it would be hard to name two things more diverse than the outline of an adze and that of a human figure. It seems probable that this process of hybridisation has had far-reaching results in the history of human culture.

A second conclusion that may be drawn from the facts is that while *hani* and *pouhenua* types appear to have diverged within the New Zealand group, the *tewhatewha* type had already arisen before the users of the weapon migrated to those islands.

¹ This case has been worked out by the present writer: *Journ. Roy. Anthropol. Inst.*, 1916, Vol. xlv, p. 309.

APPENDIX.

The Wooden Clubs of Easter Island.

Describing two clubs of the same type as that represented by Fig. 20, Thompson says:¹

“Wooden clubs; called *Ua*; made of *toro-miro* wood, 6 feet long, the point (*sic*) slightly widened and the handle ornamented with a bi-fronted head with eyes of bone and obsidian. These clubs were only used as batons of office by the chiefs, and the handle was supposed to represent the effigy of the owner.”

As the early navigators frequently refer to *hani* as batons of office, it is probable that the functions of both types were originally identical. When this similarity of function is considered in conjunction with their similarity in form it seems impossible to doubt that they are genetically allied and that the alliance is much closer than exists between *hani* and any of the forms that were figured in the previous paper. The Easter Island type was excluded from that paper because it does not seem to represent any stage ancestral to the *hani*, but rather to be a co-ordinate or a derivative. Thus it adds another to the numerous parallels that exist between the culture of Easter Island and that of the New Zealand-Chatham region.

EXPLANATION OF PLATE AND FIGURES.

PLATE XVI.

- No. 1, *Hani*. Length 1829 mm. (72 inches). Locality Taranaki. Skinner Collection.
 No. 2, *Tewhatewha*. Length 1067 mm. (42 inches). Locality unknown. British Museum.
 No. 3, *Pouwhenua*. Length 1524 mm. (60 inches). Locality unknown. British Museum.
 No. 4, Detail carving of No. 1.

TEXT-FIGURES.

- Fig. 1.—Plaited foundation for featherwork of *hani*. Cambridge University Museum of Archaeology and Ethnology.
 Fig. 2.—Cord of flax, with tassels of dogs' hair. Cambridge University Museum of Archaeology and Ethnology. Scale 1:1.
 Fig. 3.—Part of pattern carved on blade of No. 1, Pl. XVI.
 Fig. 4.—A, B, C, after Henry Balfour, *Evolution of Decorative Art*, p. 54. D, after Hamilton, *Maori Art*, Plate 27, Fig. 2. Original in British Museum.
 Fig. 5.—A. Carving and point of *tewhatewha*, No. 2.
 B. " " " *pouwhenua*, No. 3.
 C. Ridge " " " in Cambridge University Museum of Archaeology and Ethnology, brought to England by Captain Cook. The end of the blade of this example is represented in Fig. 9, A.

¹ Te Pito o te Henua, or Easter Island. *Report Nat. Mus. Washington*, 1888-89, p. 53



1.
HANI.



2.
TEWHATEWHA.



4.
DETAIL CARVING OF NO. 1.



3.
FOUWHENUA.

THE TWO-HANDED CLUBS OF THE MAORIS.

Fig. 6.—Feathers prepared for decoration of *tewhatewha*. Locality Taranaki. Scale 1:2. Skinner Collection.

Fig. 7.—A. *Tewhatewha* of type figured by Parkinson.

B. " with ridge on expansion. Locality unknown. British Museum.

C. " Edge-Partington. *Ethnographic Album*, 1st Series. Plate 373, No. 1. Pitt-Rivers Museum, Oxford.

D. " Length about 1372 mm. (4 feet 6 inches). Locality Nelson. Knapp Collection.

Fig. 8.—*Pouchenua*. Length 1220 mm. (48 inches). Locality Taranaki. Skinner Collection.

Fig. 9.—A. End of blade of *pouchenua*. Fig. 5, C.

B. " " "

C. " " " Plate XVI, No. 3.

D. " " " Skinner Collection.

Fig. 10.—Solomon Islands paddle-club. Length about 1067 mm. (42 inches). Royal Scottish Museum, Edinburgh.

Fig. 11.—Solomon Islands paddle-club. Length about 1067 mm. (42 inches). Skinner Collection.

Fig. 12.—Solomon Islands paddle-club. Length about 1067 mm. (42 inches). Royal Scottish Museum, Edinburgh.

Fig. 13.—Solomon Islands paddle-club with curved blade. Edge-Partington, *op. cit.* Plate 222, No. 1. " Said by Guppy to be a weapon of offence and defence." Edge-Partington Collection.

Fig. 14.—Niue club with curved blade. Edge-Partington, *op. cit.* Plate 63, No. 2. Length 1550 mm. (61 inches). Heape Collection.

Fig. 15.—Paddle-club, Niue. Length 2286 mm. (90 inches). British Museum.

Fig. 16.—Point, ridge and grip of Niue paddle-club. Grip ornamented with cord of plaited human hair. Royal Scottish Museum, Edinburgh.

Fig. 17.—Niue club. Length 546 mm. (21½ inches). Edge-Partington, *op. cit.* Plate 63, No. 1. Heape Collection.

Fig. 18.—Anaiteum club. Length 1067 mm. (42 inches). Royal Scottish Museum, Edinburgh.

Fig. 19.—Solomon Islands paddle. Edge-Partington, *op. cit.* Plate 205, No. 1. Edge-Partington Collection.

Fig. 20.—Solomon Islands lime spoon. Length 203 mm. (8 inches). Edge-Partington, *op. cit.* Plate 208, No. 8. British Museum.

Fig. 21.—Easter Island club. Length 1524 mm. (60 inches). Edge-Partington, *op. cit.* Plate 3, No. 4. British Museum.

A brief version of the above paper was published in *Man*, November, 1916, No. 97. This abridged version was written in the Military Isolation Hospital at Devonport, and was published in view of the imminent return of the writer to active service. It had many defects, typographical and other, and less than half of the illustrations given in this paper.

EXCAVATIONS CONDUCTED AT GHAR DALAM (MALTA) IN THE SUMMER OF 1917.

[WITH PLATES XVII-XIX.¹]

By G. DESPOTT.

A GRANT of £10 having been received from the British Association for the purpose of conducting further excavations in Malta, I decided to continue the exploration at Ghar Dalam (Fig. 1), where, though a rather limited portion of the cave has so far been explored, very satisfactory results have been obtained.

Mr. Bezzina, the proprietor of the site, who is a personal friend of mine, not only gave me the requisite permission, but afforded me all the necessary facilities. So in July and August last I had two trenches dug at a distance of 50 and 110 feet respectively from the entrance of the cave.



FIG. 1.—GHAR DALAM.

Trench No. I (1917).

This trench is the one nearer to the entrance, and is situated close to the spot where Cooke, in 1898, dug his trench No. VI and found the remains of a bear (*Ursus arctos*?). This spot was this time selected by me, in the hope of finding more of these remains, but as will be subsequently seen, no such remains were met with.

¹ Photographs by Mr. E. A. Gouder, Malta.

The present trench runs right across the whole width of the cavern, which at this point is 27 feet. At the top it is over 5½ feet wide, tapering as it goes down till at the bottom it gets to about 4 feet. Its greatest depth is over 12 feet, which is more than double that of Cooke.

In describing his trench Cooke states that the bottom was struck at a depth of 5 feet 6 inches; it must be noted, however, that Cooke confined his digging to the side of the cavern, so that what seemed to him to be the bottom was only

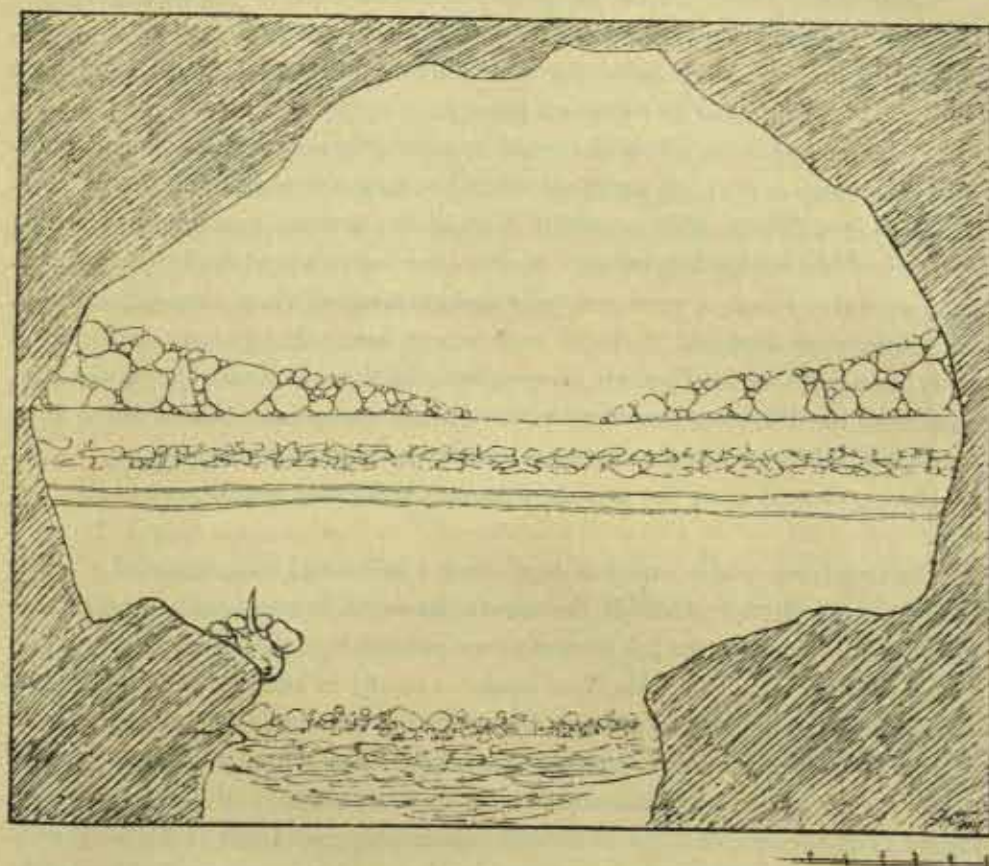


FIG. 2.—SECTION OF TRENCH NO. 1 (1917).

something like a rocky shelf which can be seen well in Section I (Fig. 2). An abrupt fall, in fact, is noticeable on the right at a distance of about 9 feet from the side of the cave. This fall is nearly equal to the distance from the top of the rock-shelf to the surface of the cave earth, and even at such a depth the bottom has not yet been reached. On the left side the conformation is practically the same.

A more or less detailed description of the present trench will not be superfluous, especially as there seems to be a marked divergence from the description made by Cooke of his trench.

The superficial layer consists of the usual boulders, varying from a few inches

to 1 foot or more in diameter; the rounded appearance of these stones, however, does not, in my opinion, tend to show that they had been rolled from any considerable distance, but is most probably due to the fact that they had undergone frequent handling on the same spot where they were now found. It should be noted also that these boulders consist of globigerina limestone and the soft coralline limestone of the locality, whose substance very easily wears away, so that the stones soon lose all angular edges and become round.

These boulders were heaped up against the sides of the cave to a height of about 3 feet, and as stated in my report of last year, and as will be seen also subsequently, the cave having evidently served for a considerable time as a human habitation, the centre was kept clear so to form a passage.

The animal remains met with in this superficial layer consisted of some bones of the cow, sheep or goat, pig and dog. With the exception of a few crowns of teeth, the rest was so friable that it could not stand the gentlest handling, and simply crumbled to dust as soon as touched. Shells of our common land snail (*Helix aspersa*, Mull.) were also found in profusion, and though many of them bore signs of age, the greater part appeared to be of very recent date. The pottery consisted of sherds belonging to several periods, ranging from the Punic to almost the present day. Some must have belonged to vases whose diameter must have been 3 feet or even more, their thickness being in some instances more than 1 inch.

Having cleared away the superficial layer, digging was commenced in the cave earth.

The first layer, which varied in depth from 6 inches to 1 foot, consisted of a rich red soil: towards the middle of the cavern, however, it was found mixed with a whitish dust, evidently due to the continuous passage over that particular point.

The animal remains in this layer consisted chiefly of bones of the same species of animals as those met with amongst the superficial boulders, but were much better preserved. Instead of the *Helix aspersa*, the shells met with in this layer belonged to the *Helix vermiculata*, Mull. and *Rumina decollata*, Linn. Of these last two I noticed that the former were of smaller dimensions than those found at present in the locality, but are very similar to those found abundantly on Filfla, a rocky islet three miles away from the south coast of Malta.

The potsherds belonged to the neolithic and bronze ages. Some are of a red and black colour, and are similar to those which are very commonly found in the fields adjacent to the ruins of Borg in-Nadur, which is a megalithic station only a few hundred yards to the south of Ghar Dalam.¹

The second layer varied in depth from 1 foot to 1 foot 4 inches, and consisted also of the same red soil; but here it was rather loose, and many angular stones,

¹ Mayr, "Prehistoric Remains of Malta," p. 61: *Abhandlungen der Bayerischen Akademie*, xxi (1901), 687

varying from a few inches to over 1 foot in length, were found embedded in it. The angular edges clearly show that these stones had not been subjected to any rolling, and on the contrary prove that, together with the soil, they were placed there intentionally; this might have been, perhaps, intended to fill one of the undulations which at the present day can be seen in the floor of the cave.

The animal remains met with in this layer consisted of a few broken bones of the stag (*Cervus elaphus*), and two or three molars, together with a tusk, of a pig. The shells belonged to the species met with in the preceding layer with the addition of a few *Cyclostoma melitense*, Sowb., and a valve of the *Venus verrucosa*, L. This last species was also met with by Prof. Zammit in other neolithic stations, and this, in my opinion, tends to show that there is no foundation for the belief that this species was introduced here by one of the Grand-masters of the Order, but, like the majority (if not all) of the other species, is a native of our sea.

The pottery consisted also of sherds of the neolithic period, but they were altogether different from those met with in the foregoing layer, some of which have been compared to those of Borg in-Nadur.

The third layer consisted of the usual red earth, in which no stones were, however, found embedded. It varied in depth from 1 foot to 1 foot 6 inches. Two layers of a sort of whitish beaten soil ran across nearly from one side of the cave to the other. These layers give the idea of what is termed a *torba* floor. They were at a distance of about 4 or 6 inches from one another.

The animal remains met with here consisted chiefly of the bones of stag, and of the same land shells met with in the foregoing layer. The potsherds, which were abundant here also, were of the neolithic type. The implements found consisted of a few sling-stones some of which were well worked; others, however, were rather rough.

The fourth layer ran down to a depth of 7 feet; it consisted of a soil which at the top was of a reddish colour and rather loose. As it went deeper it became pasty and whitish, till at the bottom it was very similar to clay. The animal remains in this layer consisted of bones and fragments of antlers of stag, which unquestionably belonged to two species, as some of the antlers were at the base as much as 3 inches in diameter. Remains of elephants were also found in relative abundance, especially towards the bottom of this layer; at the top they were rather sparingly met with.

At a depth of 4 feet from the top of this layer lay a mandible of an elephant (*Elephas mnaidrensis*), the molars of which were in an excellent state of preservation, the rest, however, being so friable that it could only be extracted in small bits.

Towards the left side of the cavern, just above the rock shelf, a broken skull of an elephant of the same species was found; one of the tusks was still adhering to it, but with the exception of this and the molars it was beyond preservation, the bones being, as in the case of the mandible, very friable. Above this skull lay some boulders

which had evidently crushed it in falling over it. A little beneath the skull some vertebrae were found lying in their true anatomical position. This proves that they had been deposited in that position with the ligaments still adhering to them, and possibly even clothed with the flesh. Besides these several other bones were found in juxtaposition, and it is also to be noted that all the loose bones had even preserved their most delicate edges. This is a clear proof that they had not undergone any rolling, as those found in the layers which will be met with subsequently. The state of their mineralization was also quite different, they being very light and of the consistency of our globigerine limestone, while those in the deeper layers were very heavy and practically as hard as flint.

The other organic remains found with these bones consisted of shells of the *Murex trunculus* and *Cerithium vulgatum*. These apparently had been broken for the purpose of extracting the mollusk. The other shells met with were a valve of an oyster (*Spondylus gaduoropus*) and valves of a cockle (*Cardium rusticum*); the first is a species which at the present day is very scarce in these waters, though it was tolerably common about fifty or sixty years ago. The second is still abundant in the muddy bottom of Marsascirocco, which is one of the creeks of the harbour close by. At the same level with these a fossil shark's tooth (Plate XVIII (B), 15) was found; it had the point chipped off, apparently from a continuous hammering with it, and should such a hypothesis be accepted as well as the supposition made relative to the broken shells of the *Murex* and *Cerithium*, and the bones in juxtaposition, we may take for granted that we have now a proof that elephants lived in Malta contemporarily with man.

The fifth layer was about 1 foot deep and consisted of a grey loamy earth, in which were embedded small pebbles and rounded boulders; some of these were as much as 1 foot in diameter, and were also very hard and heavy. These, together with the bones found amongst them, must have been carried from a great distance before they were eventually deposited where they were now found.

The majority of the animal remains consisted of much rounded molars belonging to the *Elephas melitensis*, those belonging to the *Elephas mnaidrensis* being relatively few.

The sixth layer consisted in a conglomerate of tusks, molars and fragments of bones; the greater part of the molars belonged to the hippopotamus (*Hippopotamus pentlandsi*), whilst of the few molars of elephants some belonged to the *Elephas mnaidrensis* and *Elephas melitensis*, and a fragment of one of the *Elephas falconeri*. The bones, as already stated, consisted of fragments, and with the exception of some phalanges and astragali which belonged to the hippopotamus, the rest were very difficult, if not quite impossible, to identify. They are also so rounded and so highly mineralized that in many cases it is difficult to distinguish them from the pebbles which are found with them.

Over this conglomerate, which was of a flinty consistency, the edges of the tools

were so continuously turned that digging had to be abandoned to continue trench No. II, which will be now described.

Several of the bones found in the first trench have not yet been identified.

Trench No. II (1917).

This trench was really commenced late during the summer of 1916, though it has been for the greater part continued after the completion of Trench No. I in the

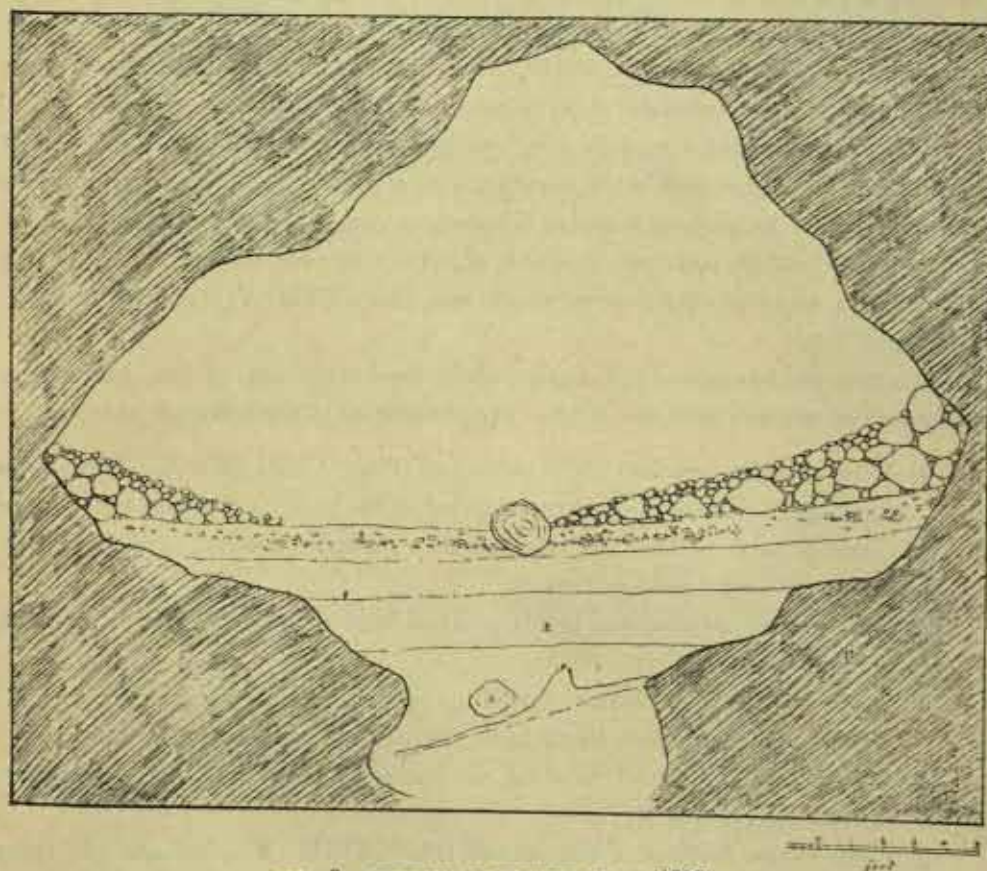


FIG. 3.—SECTION OF TRENCH NO. II (1917).

1. Human molar with conjoined roots.
2. Human milk molar.

summer of 1917. It is situated at a distance of 110 feet from the mouth of the cavern, that is about 5 or 6 feet apart from the one dug by me in the summer of 1916, and about which I published a separate report in the Proceedings of the British Association of that year.¹

The present trench (Fig. 3) runs right across the whole width of the cavern, which at this point is 29 feet. Its width at the top is about 5 feet 6 inches, gradually diminishing as it goes deeper, till at the bottom it gets to about 4 feet. Its depth

¹ P. 294 *sqq.* (Plate C).

at the surface is about 10 feet, and here too the bottom has not been yet struck.

The superficial layer consisted of the usual boulders, amongst which both the organic and inorganic remains were identical with those met with last year.

The first layer varied from 1 to $1\frac{1}{2}$ feet in thickness; it consisted of a rich red soil, in which small stones were profusely embedded.

Towards the left side of the cavern amongst this soil were noticed signs of burning. The animal remains consisted of some bones of the cow, pig, sheep or goat, and stag. With these were also found three plastrons of the carapace of a tortoise (probably *Testudo graeca*), which at the present day is not found in these islands in a wild state, though imported specimens are kept in gardens, where they even reproduce.¹

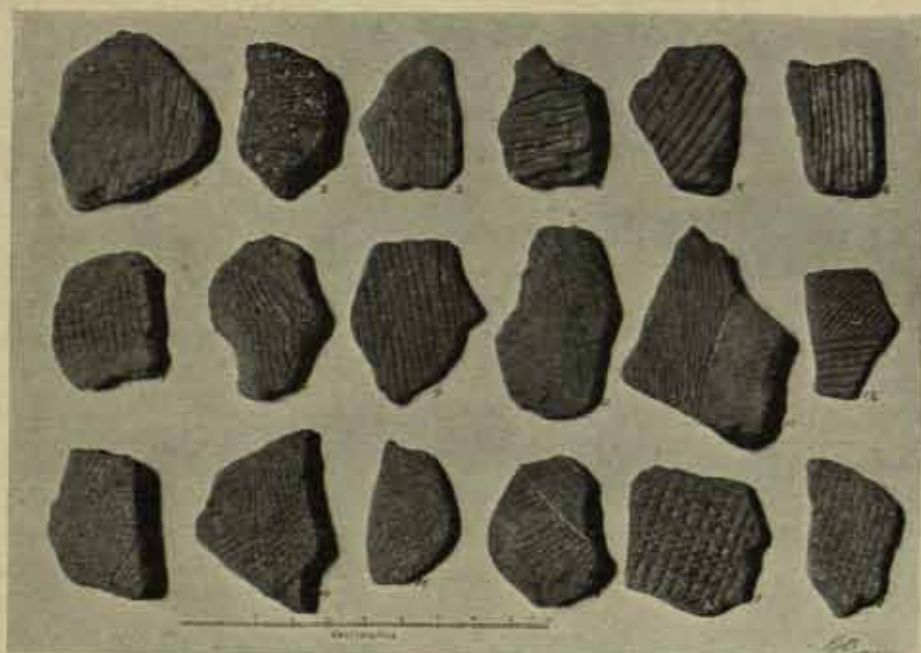
The human remains met with here consisted chiefly of several phalanges, some metacarpal and metatarsal bones, together with a part of the skull about the orbit, and some teeth. In all these remains, however, there appeared to be nothing characteristic. The pottery consisted of sherds of various texture, having incised designs (Plate XVII), some bits being exceptionally fine (Plate XVII (A), 9 and 12, and (B), 4, 6, 7 and 9).

Towards the left side of the cavern, where there were signs of fire, some implements and ornaments were met with. These consisted of the following:—

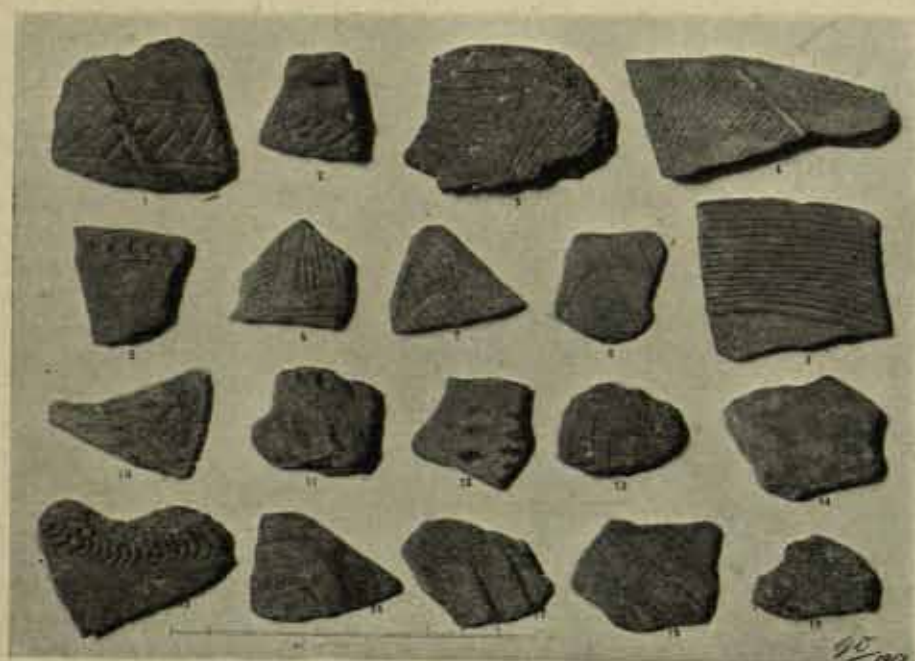
1. A very highly polished green stone axe (Plate XVIII (B), 2). This axe is not bored like the specimens exhibited at the Valletta Museum, which have been termed amulets, as they had been probably used as such when they were no longer used as tools.
2. A very neatly worked and highly polished borer made of a humerus of a bird (Plate XVIII (B), 4).
3. Another well-worked bone of one of the larger mammals (Plate XVIII (B), 3). This might have been also a borer, though the point is broken off.
4. A terracotta bull's head, in which can be traced the animal's head trappings (Plate XVIII (B), 9).
5. Three canine teeth of a dog or wolf (Plate XVIII (B), 5, 6 and 7); these are bored towards the end of the fang, they having undoubtedly been used as ornaments.
6. Some of the usual sling-stones made of the globigerina limestone.

The second layer was almost of the same thickness as the foregoing; it consisted also of a fine red soil; only very few stones, however, were found embedded therein. The animal remains met with in this layer consisted chiefly of bones of the stag and of a small rodent, probably a vole; land shells were also more or less abundant,

¹ In 1912, while assisting my friend, the late Prof. Tagliaferro, in the exploration of a cave at Pergla Gozo, we met with several bones and plastrons of a tortoise of the same genus; these were also associated with human remains and many neolithic potsherds.

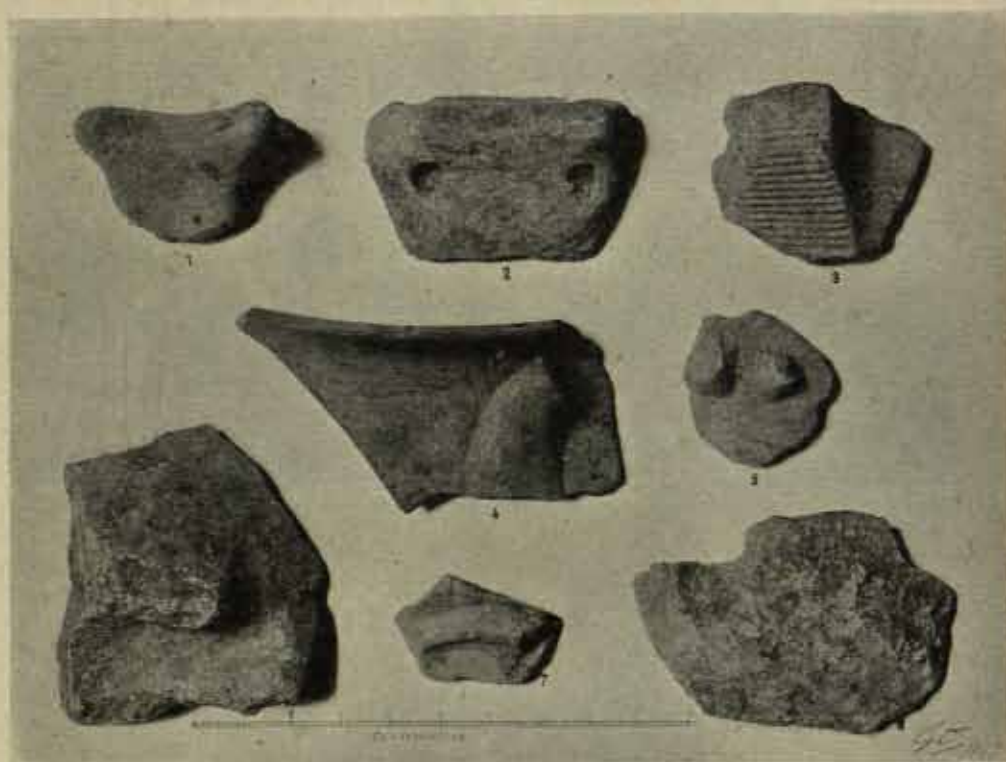


(A) POTSDERDS FROM TRENCH II, LAYER I.

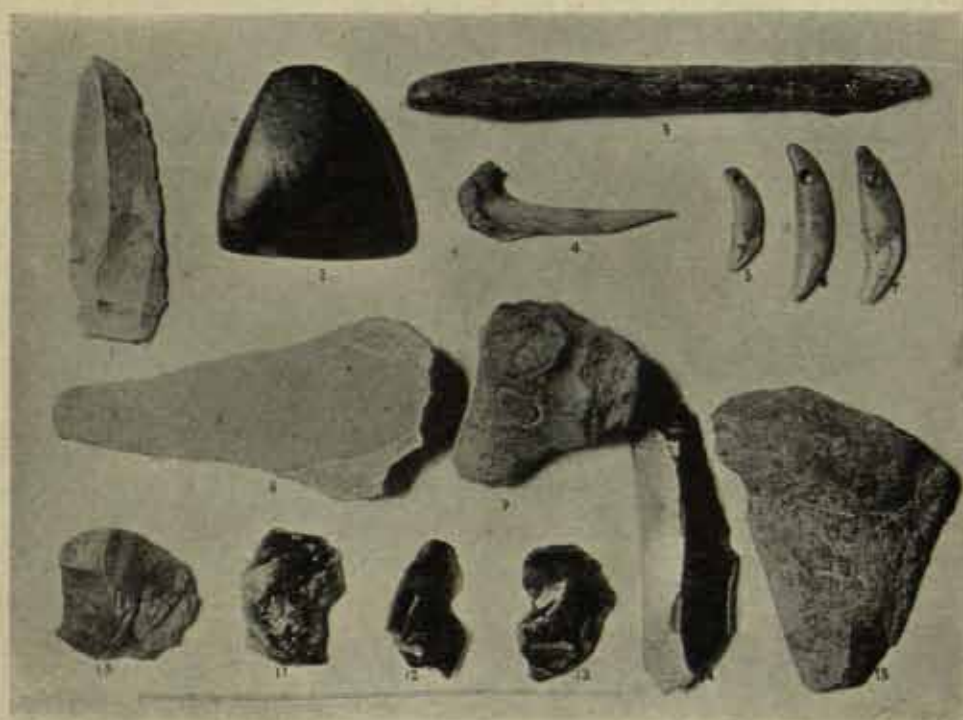


(B) POTSDERDS FROM TRENCH II, LAYER I.

EXCAVATIONS AT GHAR DALAM (MALTA).

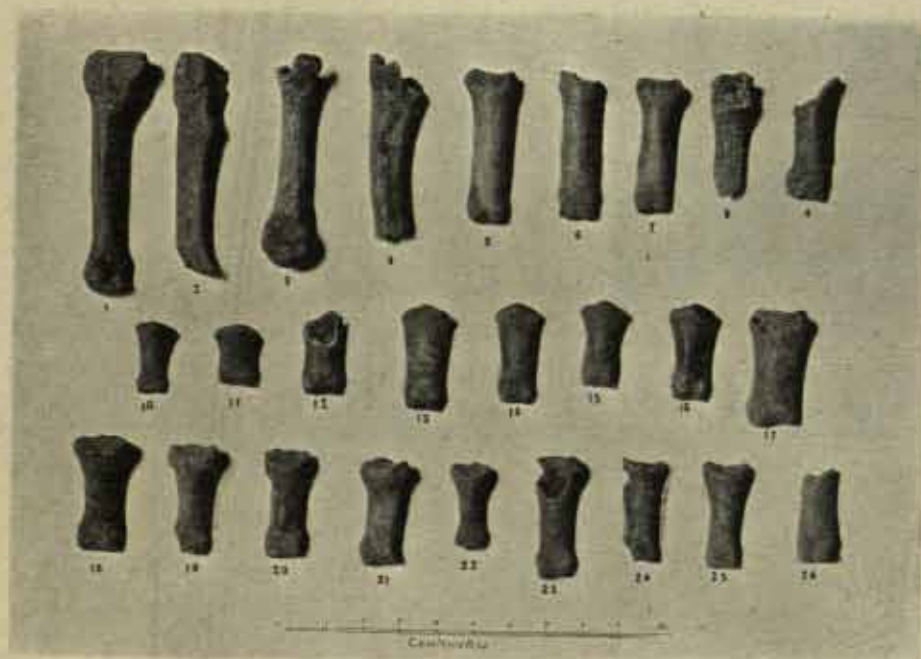


(A) POTSHERDS FROM SUPERFICIAL LAYERS.

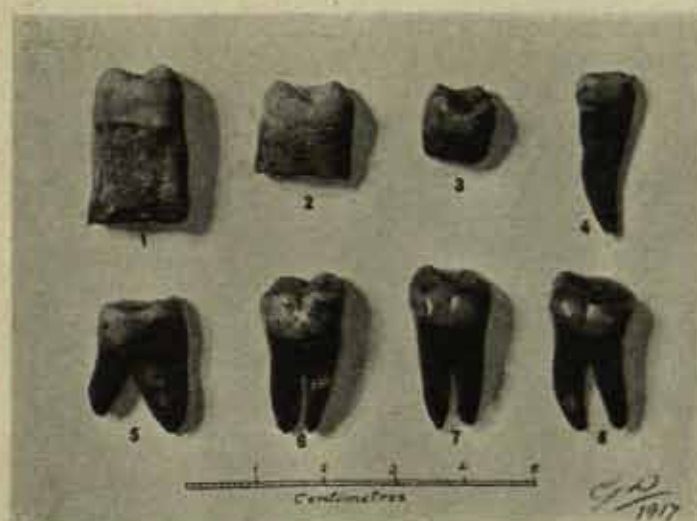


(B) IMPLEMENTS AND TEETH FROM TRENCH II, LAYERS I AND II.

EXCAVATIONS AT GHAR DALAM (MALTA).

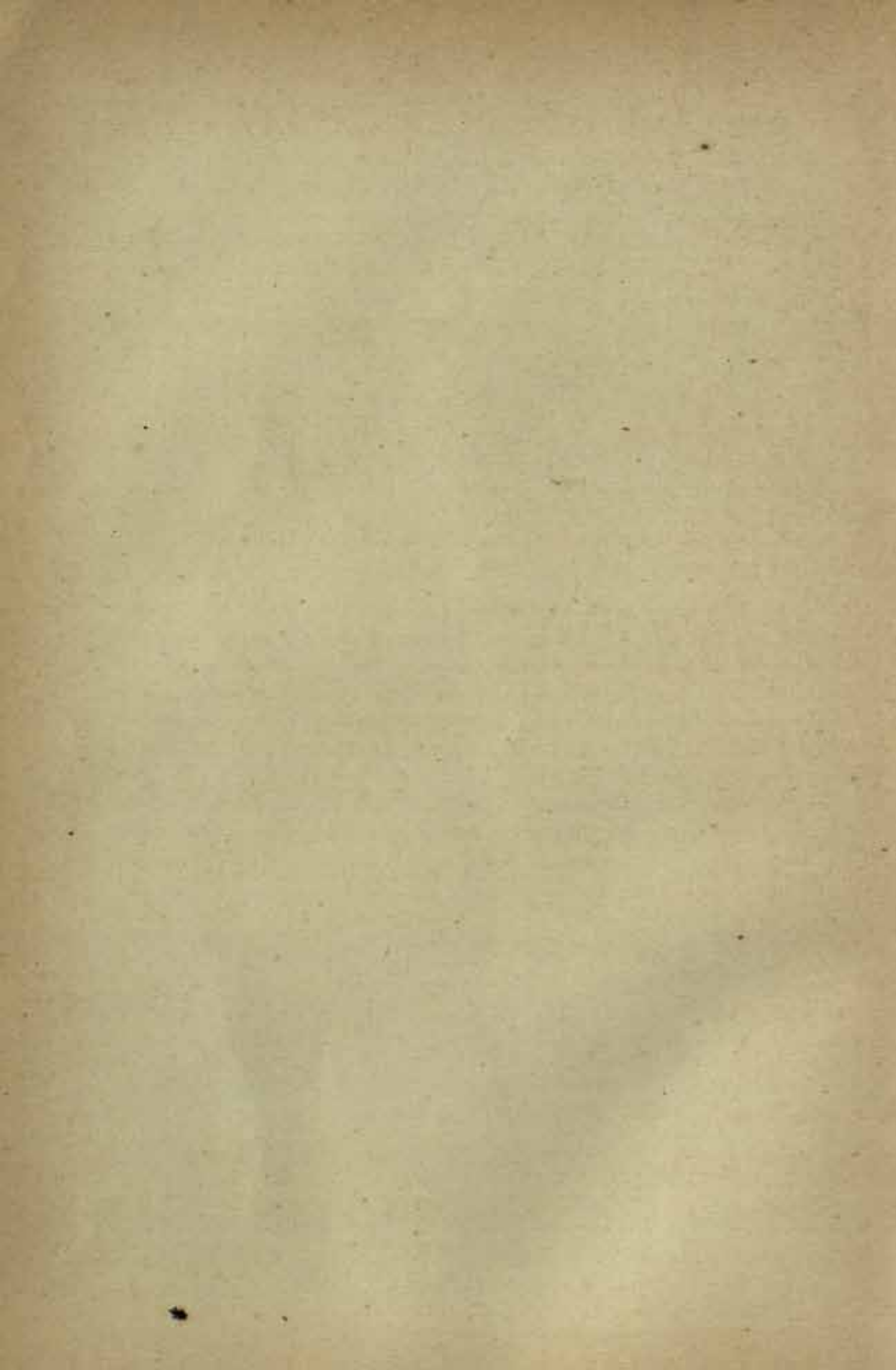


(A) HUMAN PHALANGES FROM TRENCH II, LAYER II.



(B) HUMAN TEETH FROM TRENCH II.

EXCAVATIONS AT GHAR DALAM (MALTA).



and they belonged chiefly to the *H. despottii*, C.G. The human remains consisted of some phalanges (Plate XIX (A), 10, 11, 15, 16 and 18), a part of the skull about the occiput, and a molar. In these human remains there appears to be nothing characteristic except the molar (Plate XIX (B), 1), which is larger than the average modern molars, and in which the fangs are fused in one. It is also important to note that this is the first upper molar.

No potsherds were met with in this layer, but the following implements were found :—

1. Two sling-stones much more roughly worked than those met with in the foregoing layer.
2. A flint scraper (Plate XVIII (B), 10).
3. The obsidian scrapers (Plate XVIII (B), 11, 12 and 13).
4. A chert knife ? (Plate XVIII (B), 1).
5. Another piece of apparently worked chert (Plate XVIII (B), 8).
6. A piece of blackish flint (Plate XVIII (B), 14).

The third layer was about 2 feet deep, and consisted of a fine red earth in which were embedded some rounded stones. The animal remains in this layer consisted chiefly of the bones, teeth and antlers of stag. The last-mentioned were rather abundant, and though in fragments, they show that there must have been two species of stags, as stated in the description of Trench No. I. The only human remains consisted of a milk molar, which is also the first molar (Plate XIX (B), 2). The size of this molar is conspicuously large ; in fact, the comparison can well be seen from the equivalent milk molar close to it (Plate XIX (B), 3), which is one of those found in the upper layers and which is not different from the equivalent modern milk molars. There is no sign that this molar has undergone any rolling about ; in fact, the edges about its neck are quite sharp.

The fourth and fifth layers are not worthy of a description, as they are identical in almost all respects to those of last year's trench.

NOTES ON THE SOCIAL ORGANIZATION OF AUSTRALIAN TRIBES.

By A. R. BROWN.

PART I.

INTRODUCTORY.

THESE notes were intended to be included in an extensive and systematic work on the social organization of Australian tribes, one part of which was to be a list of all the tribes at present known to us, with a brief description of the social organization of each, when that was known. It seems unlikely that I shall have the leisure to bring even the first volume of this work to completion, and I have therefore decided to publish my notes on those tribes about which I have collected first-hand information from the natives themselves. The purpose for which they were written will explain the peculiar form in which these notes are cast.

To make my descriptions quite clear it is necessary to define certain terms of which I shall make use.

Tribe.—By a tribe I mean a collection of persons who speak what the natives themselves regard as one language, the name of the language and the name of the tribe being generally one and the same.

This word "tribe" has been used very loosely by writers on Australian ethnology. For example, Howitt sometimes applies the word to what I shall call a tribe; at other times he applies it to subdivisions of a tribe; and in yet other instances he uses it to denote a group of tribes having similar customs and using the same word for "man." My use of the term agrees exactly, I believe, with that of Spencer and Gillen.

Horde.—I shall use the word "horde" (from Tatar *ürdü*, a camp) to denote what is, in Australia, an extremely important and very well-marked social division. The horde, as it is found in the normal forms of Australian social organization, may be defined by the following characters:—

(1) It consists of a number of persons who regularly live together in one camp and share a common life.

(2) The horde is the primary land-owning group, each horde owning and occupying a certain area of country.

(3) Each horde is independent and autonomous, and manages its own affairs by means of the camp-council, often directed by one head-man.

(4) A child belongs to the horde of the father—*i.e.*, descent is strictly in the male line. A woman, on marriage, joins and lives with the horde of the husband.

(5) The horde acts as a unit in its relations with other hordes of the same or of other tribes.

Family.—By a family I mean a social group consisting of a man with his wife or wives and such of their children (own or adopted) as are still dependent upon them—i.e., unmarried girls and uninitiated boys. The family as thus defined is a well-marked social unit of great importance in Australian life. Its existence involves three kinds of individual relationships: (1) that of husband and wife, (2) that of parents and children, and (3) that of children of the same parents (brothers and sisters). As the family in Australia is not exactly the same thing that it is in England, the relationships set up by the family are different. It is therefore necessary to define these individual relationships in order to determine in what sense we are to use the words "father," "mother," "child," "brother," etc., in reference to the Australian aborigines.

Husband and Wife.—A man and a woman are husband and wife when they live together (occupying the same hut or shelter in the camp and sharing one camp-fire), their union being recognized by the other members of the tribe.

Parent and Child.—The parents of a child are the man and woman (or women) with whom the child lives, who care for him and provide him with food. A child may have two or more mothers, either simultaneously or in succession. He can have only one father at a time, but may have two or more successively. A child enters a family in one of three ways: (1) as the child of the wife at the time of the marriage; (2) by birth, being born of the wife and accepted of the husband (who generally has the right to say if the new-born infant shall live or not); (3) by adoption (in general only on the death of the first mother). It is sometimes necessary to distinguish the blood-mother (she who gives birth to the child) from other mothers. And it is similarly necessary sometimes to distinguish a child's own father, who is defined as the husband of the mother at the time of the birth. It is necessary to give this definition, as some Australian tribes appear to hold that there is no physiological relationship between father and child.

Brothers and Sisters.—Two persons are brothers or sisters or brother and sister if, during the whole or a part of their infancy they have belonged to the same family group—i.e., if they have been fed and cared for by the same parents. It may sometimes be convenient to use the term "blood-brothers" to denote two children born of the same mother while she was the spouse of one and the same husband.

In the following pages, whenever the words "father," "mother," "husband," "wife," "brother," "sister," or "child" occur without any qualification, they will be used in the senses defined above, and not with the usual English connotations.

Clan.—By a clan I mean a social group marked off in some way (as by a name) from other similar groups, consisting of a number of persons who are or who regard themselves as being, closely related in one line. When the relationship is reckoned in the female line, we have clans with female descent; when it is

reckoned in the male line we have clans with male descent. In some tribes the horde is a clan in this sense, and such hordes may be called local clans or clan-hordes. These local clans are in many instances also totemic. The only other kind of clan commonly found in Australia is the non-localized totemic clan with female descent.

Systems of Relationship.—By a system of relationship I mean (1) a system of terms applied to relatives, by means of which a person classifies his relatives into a certain number of kinds, and (2) a system of rights and duties connected therewith. I distinguish two principal types of relationship system, each having different varieties, and I shall call them Type I and Type II. These may be briefly defined as follows:—In Type I only two lines of descent are recognized, this being brought about by the classification of mother's mother's brother with father's father and of father's mother's brother with mother's father. An example of a system of this type is that of the Kariëra tribe.¹ In systems of Type II mother's mother's brother and father's father are distinguished from one another, and so also are father's mother's brother and mother's father. In completely developed varieties of Type II this leads to the recognition of four lines of descent, those, namely, from father's father, mother's mother's brother, mother's father, and father's mother's brother, if we reckon through males or those from mother's mother, father's father's sister, father's mother, and mother's father's sister, if we reckon through females. An example of Type II is the system of the Aranda tribe.

In order to avoid certain difficulties in dealing with classificatory terms of relationship I have adopted the plan of using English terms (simple or compound) such as "brother" or "mother's brother" as the exact equivalents of classificatory terms in the native languages, placing them in inverted commas to show that they are used in this special manner. Thus, while *brother* without the inverted commas will be used to refer to the individual relationship between two members of the same family, "*brother*" with the inverted commas will be used as an equivalent of the native term which a man applies to his own brother, but also to other relations such as a father's brother's son or mother's sister's son.

Section.—I shall use this term (in preference to "class") to denote such social divisions as those named *Ipai*, *Kabi*, *Māri* and *Kāmbō* in some of the tribes of New South Wales. Where there are eight divisions I shall speak of *subsections*. I have rejected the more usual terms "class" and "sub-class" on account of the present confusion in their use. I have found it useful to represent the relations of sections and subsections by means of diagrams. In many tribes with four sections the relations between these are such as are conveniently represented by the diagram:—



¹ See *Journ. Roy. Anthropol. Inst.*, vol. xliii, 1913, p. 147.

Here A, B, C and D stand for the four sections. The sign = connects the two sections that intermarry; the sign / connects the section of a father with that of his child; and the sign \int connects the section of a mother with that of her child.

The diagram therefore reads as follows:—

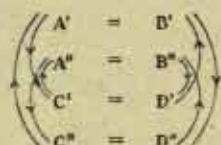
A man of A marries a woman of B and the children are D.

" B " " A " " C.

" C " " D " " B.

" D " " C " " A.

When there are eight subsections their relations may be represented by the following diagram:—



In this diagram the letters stand for the subsections. The sign = connects the subsections that intermarry in accordance with the ordinary marriage-rule of the tribe. The lines on each side of the diagram connect the subsection of a mother with that of her child, the arrow showing the direction in which the line is to be read. Thus from the diagram it may be seen that a man of A' marries a woman of B' and the children are D'', while a man of B' marries a woman of A' and the children are C'.¹

In these notes I shall use these diagrams, substituting for the letters the names of the sections or subsections in the tribe under discussion.

Phonetics.—All native words printed in italics are spelt according to the Anthropos alphabet of Father Schmidt. In the names of tribes diacritical marks are generally omitted.

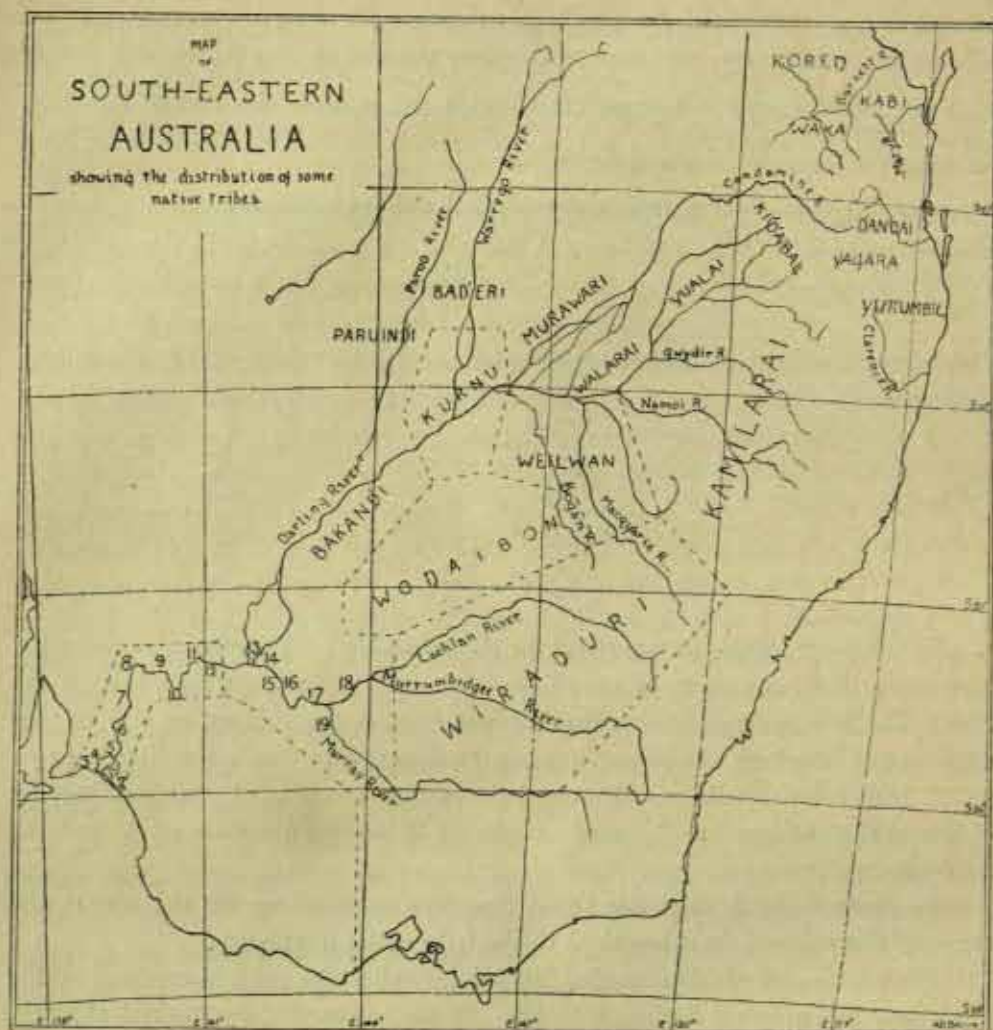
The accompanying map (Map I, p. 226) shows, by means of names in some instances and numbers in others, the approximate positions of the tribes mentioned in the notes. The boundary lines between tribes or groups of tribes are indicated by dotted lines. It must not be supposed that these lines are more than merely roughly approximate.

1. *Yārālde*.

The *Yārālde* or *Yārilde* tribe formerly occupied the country around Lake Albert, and part of the shore of Lake Alexandrina at the mouth of the Murray River in South Australia.

Yaralde is the name both of the tribe and of the language or dialect spoken by the tribe. The language is called Yaralde tinjar, while the people who speak it are

¹ I first used these diagrams in *Man*, 1910, 32.

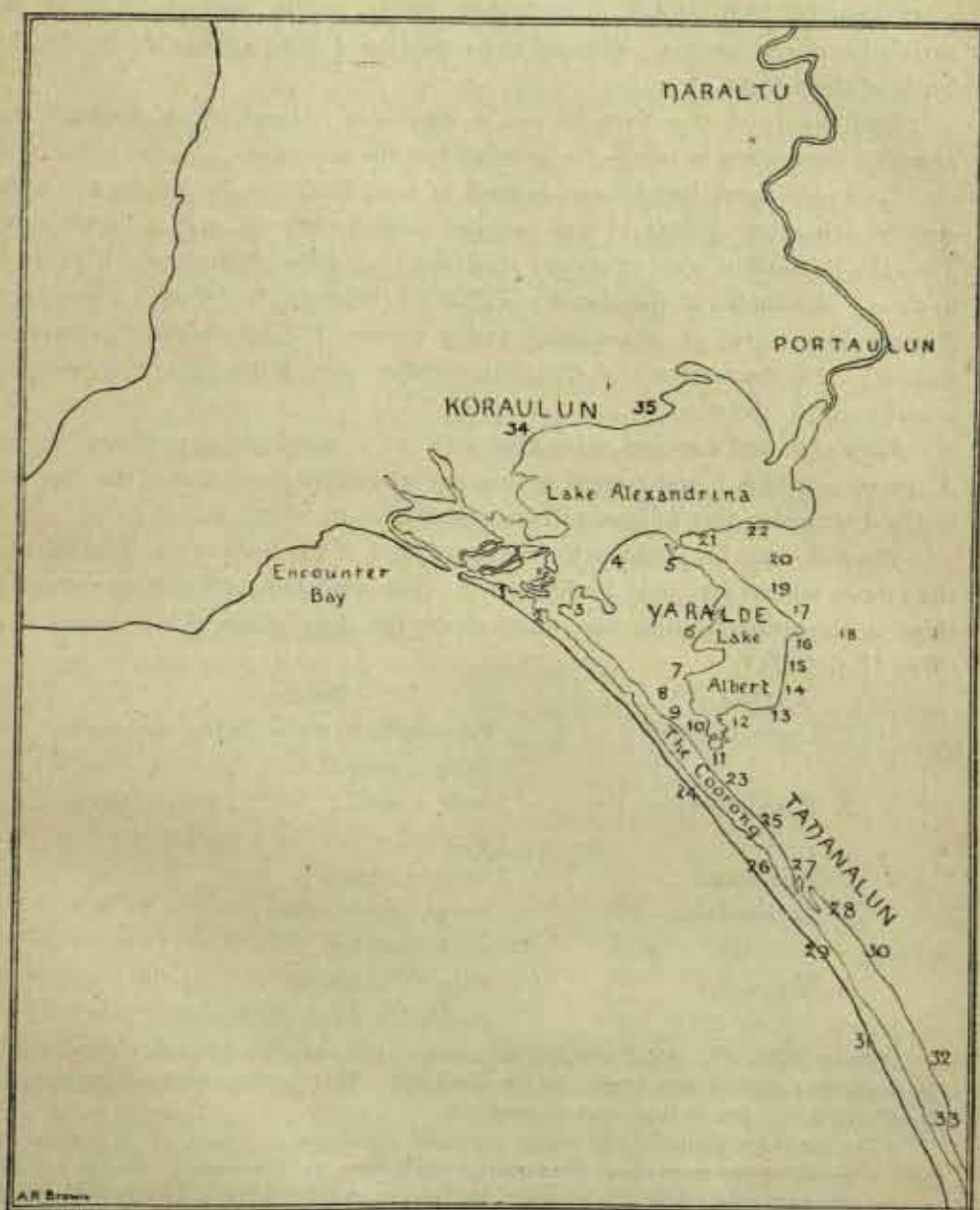


MAP I.

Yaralde kald. The origin of this name and of that of the neighbouring tribe (the Tapanalun) is explained by a legend. The ancestors of the two tribes are believed to have come down the Murray River. When the Yaralde reached the present country of the tribe they came upon the sea, and they said, in their dialect, *Yarawalayan?* "Where shall we go now?" They stayed where they were and their descendants have ever since been known as Yaralde. The ancestors of the Tapanalun similarly came upon the sea farther to the south-east, and they said *Taparawalayan?* "Where shall we go?" Their descendants have been known ever since as Tapanalun.

The Yaralde and Tapanalun, together with the Portaulun and the Koraalun and the Encounter Bay tribe, spoke closely related languages, or dialects of the same language. Since the time of Taplin it has been customary to denote these five tribes together as Narrinyeri. In all the dialects or languages this is the word for

"man." In the Yaralde language it is, at the present time,¹ pronounced *ḍarindēri*, plural *ḍarinderar*. It is not used by the natives as the name of any social division. To a member of the Yaralde tribe any blackfellow is a *ḍarindēri*, no matter what his tribe may be, and whether or not he belongs to the group of tribes to whom alone Taplin applies the term *Narrinyeri*. A native of the Adelaide tribe is a



MAP II.

¹ In Taplin's works the words and grammatical forms which he gives as *Narrinyeri* seem to be mainly Yaralde with some admixture of Tadianalun and rather more of Portaulun.

- *Darindëri*, but is not one of Taplin's *Narrinyeri*. Thus it was Taplin and not the natives themselves who first used the word to denote a distinct body of persons.

The *Yaralde* tribe was divided into hordes, each consisting of a number of persons who collectively owned and permanently occupied a certain area of country which was their hunting-ground. No one might hunt over the country of a horde other than his own, or fish in its waters, except on the invitation or with the permission of the owners. Without any exception a child always belonged to the horde of the father.

Each horde of the *Yaralde* was a clan—i.e., it consisted of persons who regarded themselves as being closely related in the male line.

Each clan-horde had a name, formed in most instances by adding the suffix *-indërar* (singular *-indëri*) to the name of some prominent spot in its country.¹ Thus the *Piltindërar* were so named after the spot called *Piltayk*, which belonged to them. A member of the clan was *Piltindëri* (belonging to *Piltayk*), a man being *Piltindëriorn* (*korn*, or *-orn* = man), and a woman *Piltindërimimini* (*mimini* = woman). All the members of the clan together were *Piltindërar*, this being the plural form of the word.

Each clan had a special connection with one or more species of natural objects. A species to which it was related in this way was called the *yaitye* of the clan, and in the description that follows will be spoken of as its totem.

The following list contains the names of most of the clans of the *Yaralde*, with the totems when they could be discovered. The numbers of the list correspond to those on the accompanying map, which shows the distribution of the various clans (Map II, p. 227).²

Clan.	Totems.
1. <i>Lugundindërar</i> ,	<i>morindëriorn</i> , white-bellied sea-eagle. ? <i>tenitëri</i> , seagull (tern?).
2. <i>Kajalindërar</i> ,	? <i>kalu</i> , a bird. ? <i>wankëri</i> , a fish like a mullet.
3. <i>Kandukari</i> ,	? <i>tenitëri</i> , seagull.
4. <i>Retirindërar</i> ,	<i>waiyi</i> , brown snake. <i>wiruri</i> , spider.
5. <i>Manäykar</i> ,	<i>rakalde</i> , water-rat. <i>kinkindili</i> , small black turtle.

¹ Meyer (Bibl. 4, p. 185) states that the names of the clans (called by him "tribes") of the Encounter Bay district were formed in the same way. This conflicts with the statements of Howitt (Bibl. 6). See on this point Appendix I.

² The list is not complete, and almost certainly contains some errors. It is possible that there were one or two more clans, the names of which were not discovered. A clan has often two or more names by which it is known to the natives, and this makes it practically impossible to compile a complete and accurate list of the clans in such a short time as that I was able to spend with the tribe. The list of totems is certainly incomplete, and perhaps in some places inaccurate. The natives are now all Christians and pay little or no attention to the totemic system. It is only possible to get a reliable list of the totems of a clan from an old man or woman of the clan itself, and this I was only able to do in a few instances, and even then it is by no means easy to arrive at the exact truth.

Clan.	Totems.
6. Liwurinderar,	<i>nquari</i> , pelican.
7. Milinderar,	<i>tukuri</i> , silver bream.
8. Turarorn,	<i>rakalde</i> , water-rat.
9. Yedawulinderar,	<i>kinkindili</i> , small turtle.
10. Tumbalinderar,	<i>turi</i> , coot.
11. Wuraltinderar,	<i>panki</i> , a water plant.
12. Kinarinderar,	<i>mainyuni</i> a stinging nettle.
13. Krapinderar,	<i>kunyari</i> , swan.
14. Paraigelinderar,	<i>paraguwaleri</i> , a snake.
15. Yukinderar,	<i>pelage</i> , small butterfly.
16. Limpinderar,	<i>karaiyi</i> , a snake.
17. Wutsautinderar	<i>puykalateri</i> , prickly lizard.
(or Waltarpularorn)	<i>tukuri</i> , silver bream.
18. Ragurinderar,	<i>piuwini</i> , hawk.
19. Mulberaperar	<i>waldi</i> , hot weather.
(or Mulberapinderar)	<i>waldi</i> , hot weather.
20. Yankinderar,	<i>waltarwaltariñeri</i> , a small bird.
21. Karatinderar,	<i>keli</i> , wild dog (dark colour).
22. Piltinderar,	<i>kalari</i> , sleepy lizard.
	<i>noykulauri</i> , mountain duck.
	<i>ngwari</i> , pelican.
	<i>pomeri</i> , catfish.
	<i>përi</i> , hawk.
	<i>tuyuyui</i> , monitor lizard.
	wild dog (light colour).
	<i>pomeri</i> , catfish.

It will be noticed that in two instances (*Turarorn* and *Waltarpularorn*) the clan-names are formed from the names of totems. Most of the other names are taken from names of localities owned by the clan.

It is very desirable that we should be able to form some idea of the former extent and volume of the clan in this and the neighbouring tribes, *i.e.*, the area of country occupied by each and the average number of persons contained in the clan. Any very exact calculation is unfortunately now impossible. The Rev. George Taplin, who settled among the natives of the Yarlde tribe before they had been greatly influenced by the white settlement, states that "in 1840 the Narrinyeri, according to the most trustworthy evidence, numbered about 3000 souls." (Bibl. 4, p. 9.) In an account of the murder by the Coorong natives of the survivors of the wreck of the *Maria*, in 1840, Taplin, writing of "all the Narrinyeri on the southern side of Lakes Alexandrina and Albert," states that "they could muster

easily 800 warriors," and adds that an eye-witness soon after counted 800 fighting men at a corrobory. (Bibl. 4, p. 154.) To provide 800 fighting men a population of at least 3000 must be supposed, so that if these statements be exact we must conclude that the tribes on the south side of the lakes (*i.e.*, the Yaralde and Tapanalun and perhaps part of the Portaulun) had a total population of not less than 3000. The natives on the other side of the lakes, including those of Encounter Bay, can certainly not have numbered less than one-third of those on the south side, and more probably numbered one-half, so that the whole group of tribes denoted as Narrinyeri must have contained, in 1840, 4000 to 4500 persons. Moreover, we know that about 1820 an epidemic of small-pox came down the Murray River, and carried off the natives literally in hundreds, so that dozens and scores of bodies were buried together. The tribes can hardly have recovered their numbers in twenty years, so that the original population of this part of the country (before 1820) may well have been as much as 6000. We may take this figure as the maximum possible.

Let us now seek a corresponding minimum. Since 1840 the natives have been dying out steadily. All the tribes except the Yaralde and Tapanalun are now practically extinct. The Yaralde tribe has suffered less than the others owing to the influence of the mission established by Taplin in their country. In the year 1877 Taplin wrote down the names of 613 members of the tribes included by him under the name Narrinyeri who were living at that time. This list is still preserved at Point Mackay Mission, and I found that by far the greater number were members of the Yaralde tribe, with some Tapanalun. It is safe to say that in 1877 there were living over 400 of the Yaralde tribe, and that the original numbers of the tribe (before 1820) cannot certainly have been less than 600. It is, therefore, practically certain that the whole of the so-called Narrinyeri cannot have numbered less than 1800 in 1820.

In one passage Taplin relates that in 1849 he saw a battle where 500 of the Narrinyeri met some 800 of the Murray natives. A muster of 500 fighting men would not be possible in a population of less than 1500.

These figures provide us with higher and lower limits. Now the Narrinyeri occupied a country of not much if any more than 3000 square miles, including even the area of the lakes from which they obtained a large part of their food-supply. Taking the maximum figure of 6000, therefore, we have a maximum possible density of population of 2 to the square mile. With the minimum figure of 1800 we have a minimum possible density of 0.6 to the square mile.

We may conclude that prior to 1820 the Narrinyeri probably numbered about 3000 to 4000 with a density of 1 to 1.3 to the square mile; that they certainly could not have numbered less than 1800, and that it is very improbable that they were more than 6000.

Comparing these figures with what we know of other parts of Australia, it appears that this district must have been one of the most densely populated of the whole continent. This is a conclusion that may be supported by considering

the natural resources. The most favoured area of Australia, for a people obtaining their sustenance as the Australian aborigines do, is the narrow strip of country on each side of the Murray River, from its mouth to a point some distance above the Murrumbidgee Junction. It is a region of small rainfall as compared with some other districts of Australia, but it has an inexhaustible supply of fresh water, and, before the white man came, had an abundance of fish and waterfowl and no lack of other game (kangaroos, opossums, wombats) and vegetable food. All the information I have been able to collect points to this strip of country as having been the most densely populated part of Australia before the days of white settlement.

The tribes of the Narrinyeri, so far as I can estimate, contained from 60 to 80 hordes. Some of these owned a large stretch of country, such as the Rapurinderar (18), while others, such as the Siwurinderar (6) had only a small territory. Taking them all together, it may be said that the average "extent" of a horde, including the land over which they hunted and the water over which they fished, was not more than 50 square miles, and may well have been less than this. We may put down the average volume of the horde (*i.e.*, the number of persons it contained) as being about 60. It can hardly have been over 100 or less than 25. Taking Taplin's figure of 800 fighting men on the south side of the lakes, and taking it that there were 40 clans or hordes all told, we have an average of 20 fighting men to the clan.

During the greater part of the year the members of the clan—that is the male members, with their wives and unmarried children—would be found living together in their own country. A camp would be formed in a suitable spot and occupied for a few weeks. This camp would be the temporary headquarters of the clan. As a rule the men and women would go out during the day in search of food and return before nightfall. When food was scarce they might scatter in small parties over the clan's hunting and fishing grounds, and such parties might be away from the main camp for several days at a time. At other times members of the clan might be away visiting their relatives of other clans, or the clan itself might receive visits from relatives. In the summer there were meetings, when several clans would camp together for a few days at a selected spot for the purpose of settling differences by fighting or talking. At such meetings corroborrees were performed. There were meetings of several clans at intervals for the purpose of initiating the young men.¹

Each clan was autonomous and managed its own affairs by means of a camp council. In every clan there was some one man who was regarded as the leader or headman of the clan. The position of headman was not hereditary, but was filled by a sort of informal election.

The way in which the clans were connected with one another will be clearer

¹ See Meyer, *Bibl.* 4, p. 191, for a description of the life of the horde in the Encounter Bay Tribe.

after the relationship system has been described. There are, however, certain special connections between clans that need to be mentioned.

One instance of a special connection is where two clans, not being immediate neighbours, have the same totem (*yaitye*). Thus the Liwurinderar (6) and Yankinderar (20) both have the pelican as their totem. In such a case the two clans are regarded as being related. The men and women of the one are brothers and sisters to those of the other, and are said to be *landular*, this being the plural of a word which, in the dual form, *landulayk*, is used to denote two brothers together. The members of the two clans cannot intermarry, nor may they fight against each other.

A second case is where two clans having adjoining territory are what is called *tauwali* (plural *tauwalur*) to each other. When two clans are connected in this way the members are regarded as brothers and sisters to each other and may not intermarry; nor would the two clans fight against each other. An example is found in the case of the Manapkar (5), Milinderar (7), and Liwurinderar (6) clans. Manapkar and Milinderar, although, according to the statements of the natives, they are separate clans (*lakalinderar*), have the same totems. The two clans are friendly and do not intermarry. The Liwurinderar clan, although it has different totems, is *tauwali* to both Manapkar and Milinderar. A Liwurinderar man could not marry a woman of either of these two clans. Though they are independent of one another, Liwurinderar and Manapkar are often spoken of together, and are collectively called Palkaruminderar. This name perhaps applies also to Milinderar, but I am not sure on this point.

When two clans are *tauwali* to one another there seems to be a tendency for each to claim the totems of the other. The existence of this peculiar local relationship makes it impossible to compile an accurate list of the clans and their totems without lengthy and laborious enquiry. If there are errors in my list it is probably owing to this cause.

The matter is one on which it would be interesting to have fuller information than I have been able to obtain. Two adjoining clans with the same totems might almost be regarded as subdivisions of one clan. The natives themselves, however, seem to regard them as separate units. So far as I could ascertain, each of the two connected clans in every case maintained a separate camp and had exclusive rights of ownership over its own territory.

Taplin has given two separate accounts of the system of relationship of the Narrinyeri (Bibl. 3, and Bibl. 4, page 48), neither of them sufficiently detailed to permit an exact comparison with other Australian systems. The description given below, while at some points it is fuller than Taplin's, will be found to agree very well with it. The terms in use in the Yarlalde tribe are given in the following list.

Maiya.—This stem, in the form *maiyo* or *maiyanowe*, means "my father's father," and is also applied to a father's father's brothers and sisters and to other relatives of the same generation. In the form *maiya* or *maiyaeri* it is applied

by a man to his son's son and daughter, and his brother's son's son and daughter, and by a woman to her brother's son's son and daughter. Thus *maiyo* and *maiya* are reciprocal terms.

Mutsa.—The term *mutzano* or *mutzanowe* means "my father's mother," and is also applied to a father's mother's brother and sister. The term *mutsa* or *mutzari* is used by a man for his sister's son's son and daughter, and by a woman for her own son's son and daughter, and for her sister's son's son and daughter. Thus *mutzano* and *mutsa* are reciprocal.

Gaiya.—In the form *gaityano* or *gaityanowe* this term denotes a mother's father, and is also applied to mother's father's brother or mother's father's sister. The reciprocal form is *gaityeri*, which is applied by a man to his own (or his brother's) daughter's son and daughter, and by a woman to her brother's daughter's son and daughter. The term *tamukunu* is sometimes used as an alternative for *gaityano*. It has probably been borrowed from the tribes to the west of the Yarlalḍe. In the language of the Ḑaṇawara tribe, which formerly occupied the country round Adelaide, *tamamu* was the term for mother's father. In the form *tami* this term is used over a large area of Western Australia.

Baka.—In the form *bakano* or *bakanowe* this term applies to a mother's mother and her brothers and sisters. The reciprocal form is *bak*, *baka*, or *bakari*, which a man applies to his sister's daughter's son and daughter, and a woman to her own (or her sister's) daughter's son and daughter. The term *kurukunu* is sometimes substituted for *bakano* with the same meaning, and *kuruk* for *baka*. The use of this alternative term has possibly been introduced from the tribes to the east of the Yarlalḍe towards the Victorian border.

Nayai.—This term means "my father" and is also applied to a father's brother, mother's sister's husband and other relatives of the same generation. "Your father" is *naiyu* and "his father" is *yikuwale*.

Yopa.—The term *yopano* or *yopanowe* is applied to the elder of two persons called *nayai* to distinguish him from the younger. It would be thus applied to a father's elder brother. Inversely a man would call his younger brother's son *yopa* or *yopari*.

Waiyati.—Used to distinguish the younger of two brothers who are both *nayai*. Thus, a man would call his father's younger brother *waiyati*. A man applies the same term to his elder brother's son, the term being reciprocal.

Gamba or *mba*.—In the form *yámbar*, *yámbarno*, *yámbaranowe* or *mbárno* this is applied to a father's sister and to a mother's brother's wife. Reciprocally, a woman calls her brother's son and her husband's sister's son *yamb*, *yámbari*, *yámbarian* or *mbári*. I believe that the forms *mbárno*, *mbári* are really the Yarlalḍe words, while the longer forms are Tapanalun, but it is impossible to be sure of this. For "his father's sister" the Yarlalḍe say *mbápali* or *bápali*.

Neyko or *Nayko*.—This term *neyko* or *neykowie* means "my mother" and is also applied to a mother's sister and a father's brother's wife. "Your mother" is *neykowie* and "his mother" is *narkowale*.

Wano.—The term *wanowe* or *wanowa* is applied to a mother's brother and a father's sister's husband. In referring to the mother's brother of another person the terms *kawa*, *wawu*, and *wapali* are used, but I am not sure whether the differences are of dialect or of grammatical distinction. "Where is his uncle?" would be, I believe, *Yaga ni wapali inikai*?

Kela.—This term is applied to an elder brother, and to a father's brother's or mother's sister's son if older than the speaker. "My brother" is *kelano* or *kelanowe*; "his brother" is *kelawale*.

Mara.—This is applied to an elder sister and to the daughters of a father's brothers and of a mother's sisters if older than the speaker. "My sister" is *maranowe*; "his sister" is *marawale*.

Tarte.—Applied to a younger brother or sister and to the sons and daughters of a father's brothers and a mother's sisters when they are younger than the speaker.

Juya.—This term (in the forms *yuya*, *yuyano* and *yuyanowe*) is applied to the son or daughter of a mother's brother or of a father's sister.

Porle.—This term means "child" (son or daughter), and is applied (in the form *porlean*) by a man to his own children and his brother's children and by a woman to her children and her sister's children. It is thus the reciprocal term of *nagai* and *neyko*.

Jaiyi.—A term applied by a man to his own child, but perhaps not to his brother's child. On the latter point I am doubtful. The term is only used in addressing and not in speaking about the child.

Jara.—A term applied by a woman to her own child, but perhaps not to her sister's child. Only used as a term of address.

Nayari.—Used by a man to denote his sister's son and daughter. A *nayari* is addressed by the term *ay*. The term is the reciprocal of *wano*.

Yulundi.—A man applies this term to his wife's father and his wife's father's brothers, and (reciprocally) to his daughter's husband and his brother's daughter's husband.

Karine.—A man applies this term to his wife's mother and she applies the same term to him.

Roggi.—A man applies this term to his wife's brother and to his sister's husband, and also to his wife's sister and his sister's husband's sister.

Jopeli.—A man applies this term to the wife of any man he calls "brother" (*kela*, or *tarte*), and to the wife of his *mutsa* or his *yaityeri*. A woman calls her husband's brother *jopeli*.

Rinanowe.—A woman applies this term to the wife of any man she calls "brother" and reciprocally to her husband's sister.

Waragalupi.—A man applies this term to the husband of any woman he calls *yuya*, and reciprocally to the *yuya* (mother's brother's or father's sister's son) of his wife.

Nauwiruli.—Used by a man to denote the husband of his wife's sister.

Maiyareli.—A man applies this term to his son's wife or his brother's son's wife, and she applies the same term to him.

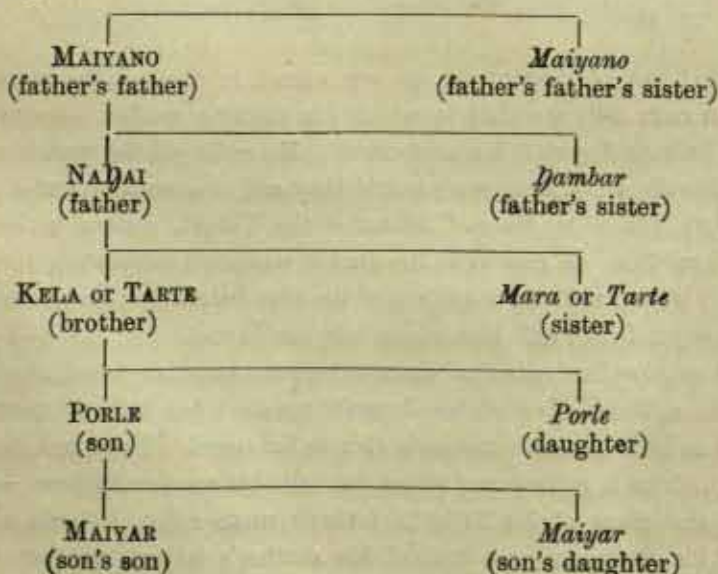
Kutit.—Applied by a man to the wife of his *nayari* (sister's son).

Nape or *Napian*.—"My wife" or "my husband." Used by a man only in reference to his own wife, and by a woman to her own husband.

Besides the above terms, there are others used for certain relatives together, as *rituleyk*—father and child; *ratuleyk*—mother and child; *landulayk*—two brothers; *landular*—a number of brothers (more than two); *yoperleyk*—a man with his *yopari*, etc.

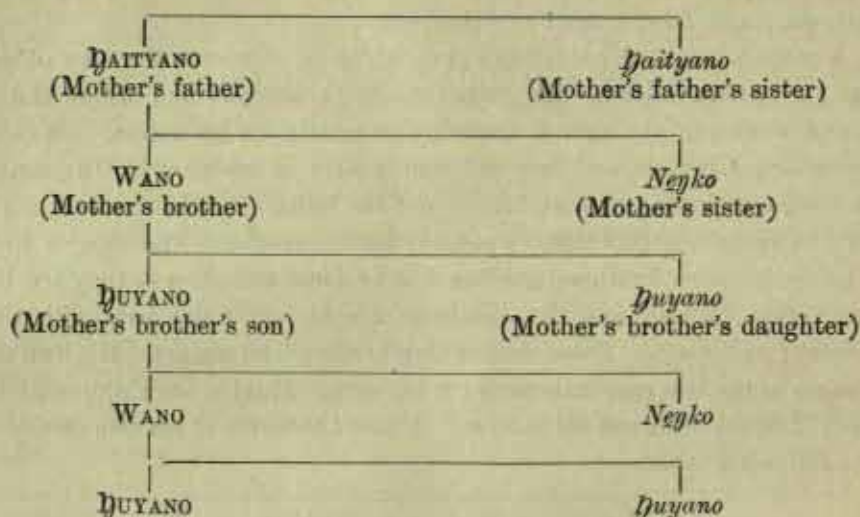
The basis of the Yarlde system of relationship is the classification of grandparents into four kinds. These are the *maiya*, father's father and his brothers and sisters; *mutza*, father's mother and her brothers and sisters; *yaitya*, mother's father, etc.; and *baka*, mother's mother, etc.

A man belongs to his father's clan, which is, of course, the clan of his own *maiya*, or father's father. His father's father's brothers and sisters and all the men and women of the clan of the same generation are his *maiya*. He calls them *maiyno* or *maiyanowe*, and they call him *maiya* or *maiyaereri*. The sons of his male *maiya*, including his own father and his father's brothers, are all his *nayai*, while the daughters (his father's sisters) are his *yambar*. The sons of his *nayai* (including his own brothers) are his *kela* or *tarte*, according as they are older or younger than himself, and the daughters are his *mara* and *tarte*, with a similar distinction as to age. These are his clan brothers and sisters. His own children and those of his *kela* and male *tarte* are his *porle*. Finally, the children of his sons and his brothers' sons are his *maiya*. A man's relatives of his own clan are shown in the following table:—



These relatives, of his own clan, all belong to what may be called one line of descent (counted through males), being all descendants of the *maiya*. The next

line of descent to be considered is that of the *yaitya* (mother's father). A man applies the term *kaywiti* to the clan to which his mother and her father (his *yaitya*) belong. His mother's father and the other men and women of the same clan and generation are his *yaityano*. The sons of these are his *wano* (mother's brother) and the daughters *neyko* (mother and mother's sister). The children of his *wano* are his *yuyano* (male and female cousins). The sons of his male cousins he calls *wano*, they calling him *ay* or *nayari*, and the daughters he calls *neyko*. There is here a most interesting and important feature of the Yarlde system as compared with the Australian systems. The same term (*wano*) is applied to a mother's brother and to a mother's brother's son's son, and thus the reciprocal term (*nayari*) is applied both to a sister's son and to a father's father's sister's son. The following table shows the relation of the mother's clan or *kaywiti* :—



The next line of descent to be considered is that of the *mutsa* or father's mother. A man calls the clan to which his father's mother belongs (which is of course his father's *kaywiti*) his *mutsaaurui*. He calls all the members of the clan, male and female, *mutsaano* or *mutsau* and they call him *mutx* or *mutsa*.

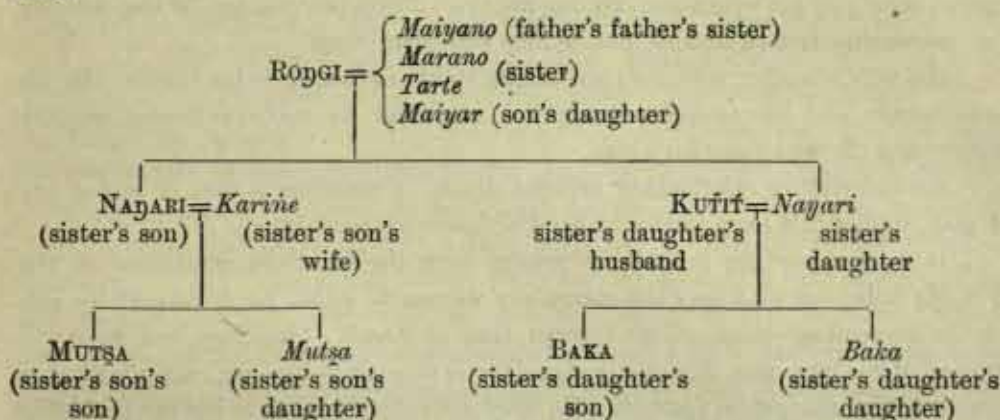
The last of the four lines of descent of the Yarlde system is that of the *baka* or mother's mother. A man calls the clan to which his mother's mother belongs his *bakaaurui*. He calls all the members of the clan *bakano* (or *kurukumu*) irrespective of sex or age, and they call him *bak* or *bakq* (or *kuruk*).

These are the four principal clans to which a man is related, viz., his own clan (*maiya*), his mother's clan or his *kaywiti* (*yaitya*), his father's mother's clan or *mutsaaurui* and his mother's mother's clan or *bakaaurui*. There are, however, other clans to which he is related and which he calls his *maraurui* (*mara* = elder sister). These are the clans of his father's father's mother (his father's *mutsaaurui*, the *kaywiti* of his own *maiyo*) and of his mother's father's mother (his mother's *mutsaaurui*, the *kaywiti* of his own *yaityano*). A man calls all the men of these two clans *kela* (elder brother) and all the women *mara* (elder sister).

Besides these general clan relationships which are traced through the four grandparents, a man is also related to certain persons in many other clans without thereby being related to all the members of the clan to which such a person belongs. Returning to the relatives of a man's own clan we may note the following relationships brought about by marriage:—

The wife of his	<i>maiyo</i>	is his	<i>mutzono</i>
" " " "	<i>nayai</i>	" "	<i>neyko</i>
" " " "	<i>kela</i> or <i>tarte</i>	" "	<i>yopeli</i>
" " " "	<i>porle</i>	" "	<i>maiya-reli</i>
" " " "	<i>maiya</i>	" "	<i>yopeli</i>

The above are all women who belong to other clans, but come to live with his clan on marriage. On the other hand, the women of his clan marry into other clans. The husband of a *maiyo* (father's father's sister), of a *marano* or *tarte* (sister), or of a *maiya* (son's daughter) is called *roygi*, and the children of these are called *nayari*. The relationships thus established are shown in the following table:—



The husband of a father's sister (*yambarno*), unless he be a relative (such as *wano*) by some other connection, is called *roygi*. The children of the *yambarno*, to whatever clan they may belong, are called *yuyano*. The husband of a *porle* (daughter or brother's daughter) is called *yulundi*, and the children, whatever may be their clan, are *yaityeri*.

Turning now to the *kaywiti*, or mother's clan, there are one or two interesting features. The wife of a *yaityano* (mother's father's brother) is *bakano*. The wife of a *wano* (mother's brother, or mother's brother's son's son) is *yambarno*. The wife of a *yuyano* (mother's brother's son) is apparently *kariné*. This last is an important feature, as *kariné* is the term applied to a wife's mother.

The female members of a man's *kaywiti*, marry into other clans. The husband of a *neyko* (mother's sister) is *nayai*, and their children are regarded as brothers and sisters. The husband of a *yuyano* (mother's brother's daughter) is denoted by a special term, *wārāyalup*.

Besides these more direct relationships there are others more distant. Thus, two men who have the same *bakaurui* or the same *mutzaurui* are "brothers" to one another.

The above description should make it clear that each man has a number of relatives in different clans besides those in his own clan, his *kaywiti*, *mutzaurui*, *bakaurui* and *maraurui*. The difference is that the individual relationships just described do not necessarily involve relationship with all the other members of the same clan. Thus a clan may contain a man who is *nagai* (mother's sister's husband) to me and whose sons and daughters are my "brothers" and "sisters"; but this does not necessarily involve any particular relation between me and the other members of the clan.

We must now consider the relationships set up by a man's own marriage. The clan from which he obtains his wife becomes his *nauwarui*. His wife's father and the clan brothers and sisters of this man become henceforth his *yulundi*. The clan brothers and sisters of his wife are his *roygi*. In receiving his wife he gives a "sister" in exchange, and the children of this woman, who of course belong to his wife's clan, are his *nagari*. The other children of the clan are not necessarily related to him, and he may call them *roygi*.

His wife's mother, who does not belong to his *nauwarui*, is his *karine*. By an unfortunate and inexcusable oversight I neglected to make sufficient enquiry concerning the wife's mother's clan.

An interesting relationship brought about by marriage is that of *nauwiruli*. A man applies this term to the husband of his wife's own sister.

It is now possible to state in precise form the marriage regulations of the Yarlde tribe. A man may not marry any woman to whom he is related by any of the recognised relationships (except that of *roygi*). He may not marry a woman of his own clan, nor of any clan that is *tauwali* to his own, nor of any clan that has the same totem (*yaitye*). He may not take a wife from his mother's clan (his *kaywiti*), his father's mother's clan (his *mutzaurui*), his mother's mother's clan (his *bakaurui*), nor from the clans of his father's father's mother and his mother's father's mother (his *maraurui*). He may marry into any other clan, but he may not marry a woman who is related to him by any of the recognised blood-relationships—e.g., his *yuyano* (father's sister's daughter), or his *marano* (mother's sister's daughter).

A man can only obtain a wife by giving a woman in exchange. If he had an unmarried sister he would give her. If he had no sister of his own any unmarried girl of his own clan would do, but he would have to obtain the consent of her father and brothers, and in any case the exchange would have to be approved by the whole clan. Indeed, it is the clan, and not the individual, which arranges the marriage, obtaining wives for its males in exchange for the marriageable women. If a man cannot find a girl from his own clan he may be able to obtain one from a clan that is *tauwali* to his own. Thus a man of the Milinderar clan might obtain a woman from the Manaykar clan to give in exchange for a wife. In rare cases a

woman might be married without having been paid for by another given in exchange, but this was looked upon as a disgrace for the woman herself and for the clan into which she married. The woman given in exchange is taken as wife by one of the men of the clan.

It is obvious that in these circumstances the arrangement of marriages was a lengthy and often troublesome business. It would seem, however, that, in former times, infringements of the marriage regulations were of rare occurrence. (Since the establishment of the Mission amongst them this is no longer so.) I was told of instances in which a man had married a woman of his *bakaurui* (mother's mother's clan). Such a marriage, however, was very likely to lead to quarrels and fights, and the husband was always in danger of being punished by evil magic (*milin*) by old men of the tribe who disapproved of his action.

Perhaps the marriage regulations will be made clearer by giving a concrete example. Dan Wilson (my best informant of this tribe) belongs to the Liwurinderar (6) clan. He could not marry into the Manaykar (5) or Milinderar (7) clans owing to the local relationship, those clans being *taucalar* to him. He could not marry into the Yankinderar (20) clan because it had the same totem as his own. His *kaywiti* (mother's clan) was *Mulberaperar* (19), his *mutzaurui* (father's mother's clan) was *Paraigelinderar* (14), and his *bakaurui* (mother's mother's clan) was *Piltinderar* (22). He could not take a wife from any of these. The *Yukinderar* (15) clan was his *maraurui*, being the *mutzaurui* of his mother, and the *Rapurinderar* (18) clan was also his *maraurui*, being his father's *mutzaurui*, so that he could not marry into them. Besides these clan relationships, as they may be called, Dan Wilson of course had many female relatives in other clans whom he might not marry. Thus the *Karatinderar* (21) clan was his mother's *bakaurui* and, moreover, one or two women of his clan (who were *yambar* to him) had been given to *Karatinderar* men. For this reason practically all the members of this clan are Dan's relatives (*wano*, *yuyano*, etc.), so that he could not find a wife there.

Dan Wilson obtained a wife from the *Kinarinderar* (12) clan, which thereby became the *kaywiti* of his children, the *mutzaurui* of his grandchildren (son's children) and the *maraurui* of his great-grandchildren (son's son's children). Thus, Dan having married into this clan, his sons and sons' sons and sons' sons' sons are prohibited from marrying into it.

There is one matter, of fundamental importance, about which the genealogical material collected did not give sufficient information. The *Yaralde* system of relationship is a variety of what I propose to call Type II. Now, in most of the Australian tribes having a system of this type (as, for example, in the *Dieri* and *Aranda* tribes), the proper person for a man to marry is his second cousin, being his mother's mother's brother's daughter's daughter, or his father's father's sister's son's daughter, or some person who stands to him in the same relation and is denoted by the same term. It would, therefore, be of considerable importance to ascertain if such marriages of second cousins are allowed by the *Yaralde* system.

Unfortunately, as mentioned above, this could not be done. A man's mother's mother's brother's daughter is his *bakano* (belonging as she does to his *bakaurui*). I imagine that it is possible that, if she married a suitable husband, she might become his *kariñe* (wife's mother) and her daughter be given to him to wife; I have no evidence that such marriages occurred, but there does not seem to be any objection to them so far as I understand the system.

A man's father's father's sister's son is his *nayari*, and the wife of a *nayari* is called *kariñe*. The latter term would suggest that the daughter of this pair (i.e. his father's father's sister's son's daughter) would be eligible as his wife. Against this there is the fact that she is his *mutsa*, and certainly as a rule a man may not marry a woman to whom he applies this term. The question has to be left open.

It is quite possible that the Yarlalde system does permit a man to marry his second cousin (of the kind mentioned), but it is not certain that such marriages would not be regarded with disapproval.

To complete this account of the relationship system it would be necessary to describe the way in which a man's conduct is regulated by custom in his dealings with different kinds of relatives. On this subject, however, I have only the scantiest information.

I was told that in former times a man might not fight against his *kaywiti* (mother's clan). He would always be welcome to visit his mother's people and would be entertained and looked after by them. A man would also be well received by the members of his *mutsaurni* (father's mother's clan) and of his *bakaurui* (mother's mother's clan), and I believe that he would not fight against these clans. I was told that men who are *mutsa* to one another are like brothers, and this is confirmed by the fact that a man applies the same term, *yopeli* to the wife of his *mutsa* as to the wife of his brother. A man is always on friendly terms with his *nauwarui* (wife's clan). He would be welcomed on a visit and hospitably entertained. A man might speak freely to his *yulundi* (wife's father), but he might on no account speak to or have any contact with his wife's mother.

An interesting relationship is that between two men who have married two sisters and who call each other *nauwiruli*. Two such men are said to be very closely connected. They must always help each other in every possible way. If a man went on a journey by himself, he would, if possible, leave his wife and children in the care of his *nauwiruli*. If he visited a camp to which one of his *nauwiruli* belonged, the latter would entertain him.

It should be added that in the Yarlalde tribe, as in so many Australian tribes, persons never address one another by name, but use instead the proper term of relationship.

It is now too late to obtain information about the totemism of the Yarlalde tribe. It is possible that there formerly existed an organised totemic ritual. Taplin has not recorded anything on the subject, and my own enquiries failed to elicit any information, but this must not be taken as evidence that such a ritual did not

exist. The men and women of a clan might eat, and did eat, their totem, if it were edible, but they were careful to destroy all the remains (bones, etc.), lest they should fall into the hands of an enemy and be used for evil magic. Some part of the totemic animal was in some instances used as a badge of the clan. Thus the Liwurinderar used to carry pelican skins on their spears when they went out to fight.

Further information on the language, customs, etc., of the Yaralde will be found in the works mentioned in the bibliography.

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[Reprinted, with additions, in Woods' *Native Tribes of South Australia*.]
- (3.) Taplin (Rev. George), *The Folklore, Manners and Customs of the South Australian Aborigines*. Adelaide, 1879.
- (4.) Woods (J. D.), *The Native Tribes of South Australia*. Adelaide, 1879.
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2. *Tājanālun*.

The Tājanālun tribe formerly occupied the country to the south-east of the Yaralde, and lived on the shores of the long narrow sheet of water known as the Coorong. The language or dialect was very similar to the Yaralde țigar and the two tribes seem to have had exactly the same social organisation and the same customs.

The following is a list of Tapanalun clans with the totems where they are known. The information from which the list is compiled is not very trustworthy.¹

<i>Clan.</i>	<i>Totems.</i>
23. Timpuruminderar,	<i>maluwi</i> , a big fish.
	<i>tili</i> , blue fly.
24. Kargarinderar,	<i>galgarinderiorn</i> , bull ant.
	? <i>kanmera</i> , mullet.
25. Kaikalabinderar,	
26. Kanmerarorn, or Kanmer- inderar,	
27. Mantāndar,	
28. Ȧaiyinderar,	
29. Puruwinderar,	
30. Momakenderar,	
31. Negkandular,	
32. Milminderar,	

¹ The numbers refer to Map II, which shows the approximate position of the clans.

In reference to this list of clans it should be noted that with regard to some clans, such as the Wuraltind̄er̄ar (11) and Kinarind̄er̄ar (12) included in the Yaralde list, it is difficult to decide whether they should be considered to belong to the Yaralde or to the Tapanalun tribe. As one of my informants said, they are "mixed Yaralde and Tapanalun." In other words, there is no clear fixed boundary between the two tribes.

3.—*Encounter Bay Tribe.*

The natives who formerly owned the country around Goolwa and Encounter Bay spoke a dialect closely related to Yaralde, and had the same social organisation and observed the same customs as the Yaralde tribe. It is possible that they were really a part of this tribe. One of my native informants told me that these people, whom he spoke of as *Tarbanawalun*, were merely a division of the Yaralde kald.

The tribe (if it were really such) is now practically extinct. I could only learn the name of one clan, the Ramind̄er̄ar, and even about that one could obtain no satisfactory information.

Bibliography.

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[Reprinted in Woods' *Native Tribes of South Australia*.]
- (3.) Wyatt (William), *Some Account of the Manners and Superstitions of the Adelaide and Encounter Bay Aboriginal Tribes, with a vocabulary of their language, names of persons and places, etc.*
[Reprinted in Woods' *Native Tribes of South Australia*.]
- (4.) Woods (J. D.), *The Native Tribes of South Australia*. Adelaide, 1879.

4.—*Koraulun.*

Koraulun is the name by which the Yaralde denote the former inhabitants of the northern shore of Lake Alexandrina, but I am not satisfied that this is really the tribal name and only use it for convenience.

The social organisation of the tribe was similar to that of the Yaralde. The two tribes had frequent dealings with one another and communicated by smoke signals across the lake.

I could only obtain information about two clans of this tribe. The Pūpuratpular clan (number 34 on the map) held the country around Milang. The totems of the clan were *peldi*, musk duck, and *kērti*, a bird living in the reeds, possibly a kingfisher. Another clan (35 on the map), formerly occupying the country around Taldarap (now called Tolderol), had for its totems *lanari*, grey goose, *kārilbali*, a little bird like a skylark, and *patpotariki*, a small bird. I was told that the name of this clan was Korowalde, but this is only another form of the name Koraulun, given above as possibly the name of the tribe. Taplin mentions a clan named Korowalle, and gives the whipsnake as its totem. It therefore seems probable that *Korowalde* (or *Korowalle*) is a general name for a number of clans—possibly for the whole tribe.

Bibliography.

The Koraulun is one of the tribes included by Taplin under the name Narrinyeri. For bibliographical references see under "Yaralde," p. 241.

5. *Portaulun.*

According to informants of the Yaralde tribe, Portaulun was the name of the tribe that formerly occupied the lower part of the Murray River where it enters Lake Alexandrina. The social organization of this tribe was similar to that of the Yaralde.

6. *Haraltu.*

The Haraltu tribe formerly occupied the banks of the Murray River between Swanport and Mannum. I am not quite sure of the correct name. The Daguruku immediately to the north gave it to me as Haralt or Haraltu. The Yaralde seem to refer to the same tribe by the name *Wanakald* or *Wanaulun*.

What little information I could obtain about this almost extinct tribe points to its having had a social organization similar to that of the Yaralde. It was divided into local clans, each with its own territory and each having one or more species of natural objects as its totem or *yayuzu*. Thus, near Mupuluogko (Mobilong as it is now called) was an important clan having as its *yayuzu* the black duck *yakury*. A child belonged to the clan of its father. Marriage within the clan was forbidden.

Of the system of relationship I gathered only scanty details. It seemed to me probable that it was in the main similar to that of the Yaralde. The strict accuracy of the following list of terms cannot be vouched for:—

<i>metat</i> , father's father.	<i>yayara</i> , son (female speaking).
<i>māzan</i> , father's mother.	<i>yuluwuntu</i> , wife's father, wife's mother.
<i>yatat</i> , mother's father.	<i>yuzunta</i> , mother's brother's daughter, father's sister's daughter (female speaking).
<i>pakaiya</i> , mother's mother.	<i>yandi</i> , mother's brother's son, father's sister's son (female speaking).
<i>yiyiga</i> , father.	<i>maiñuzu</i> , brother's son (female speaking).
<i>yaraga</i> , mother.	<i>Warayalup</i> , mother's brother's daughter's husband.
<i>kadaga</i> , mother's brother.	
<i>yambara</i> , father's sister.	
<i>kula</i> , elder brother.	
<i>yandutau</i> , younger brother.	
<i>maiaga</i> , elder sister.	
<i>yamaiya</i> , younger sister.	
<i>yaiñi</i> , son (male speaking).	

7. *Daguruku.*¹

The Daguruku tribe formerly occupied the banks of the Murray River from Mannum to about Herman's Landing. The social organization seems to have been

¹ My information about this tribe was obtained from an old woman named Jenny, whom I met at Morgan in 1914. Her father belonged to the Dajawara tribe of Adelaide, but her mother was Daguruku, and she was adopted into her mother's tribe when she was a girl.

similar in the main to that of the Yaralde tribe. The tribe was divided into localised clans, each owning and occupying a defined portion of the tribal territory. Each clan had a special relation to one or more species of natural objects which was the *fini* of the clan. I have very little information about the clans and their totems. At Mannum, on the west (right) bank of the river there was a clan named *Welula* (said to be named after the sugar ant) with the *witakieu* (Murray cod) for its totem. On the opposite side of the river was a clan called *Kupulaka*, which also had the cod for its totem. The members of these two clans might not intermarry. At Manupka there was a clan named *Tupawalaka*, having the *witsamayk* (musk duck) for totem.

The following is an incomplete list of terms of relationship¹—

melei or *metša*, father's father, father's father's sister, son's son (m.) brother's son's son (m. f.), son's daughter (m.), brother's son's daughter (m. f.), brother's wife (f.).

noidla, father's mother, father's mother's brother, son's son and daughter (f.), sister's son's son and daughter (m. f.).

yatta, mother's father, mother's father's sister, daughter's son and daughter (m.), brother's daughter's son and daughter (m. f.).

paka, mother's mother, mother's mother's brother, daughter's son and daughter (f.), sister's daughter's son and daughter (m. f.).

pita, father, father's brother.

yurla, father's sister, mother's brother's wife.

wawur, mother's brother.

yaka, mother, mother's sister, father's brother's wife.

marāka, elder brother (*markilaky*) = two brothers together.

payka, younger brother.

maika, elder sister (*mauilaky*) = two sisters together).

laka, younger sister.

reya, son, daughter.

pipka, husband.

yamailu, wife (woman).

mambuk, husband's brother.

mambua, brother's wife (m.).

lunta, wife's mother, wife's father, daughter's husband (f.).

raykai, sister's husband (f.), wife's brother, husband's sister.

napnap, brother's son (f.).

kurumera, mother's brother's daughter's husband (f.), wife's mother's brother's daughter (m.).

runna, mother's brother's daughter (f.), father's sister's daughter (f.).

runta, mother's brother's son (f.), father's sister's son (f.).

pyma, sister's son and daughter (m.).

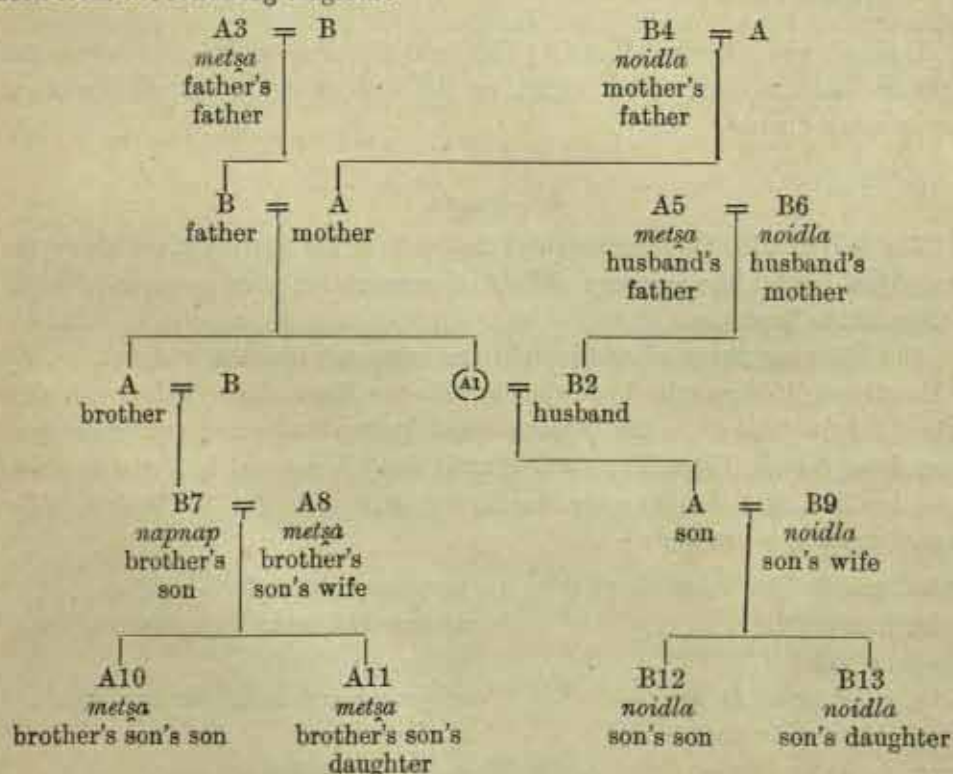
¹ In this and other lists m. stands for "male speaking," and f. for "female speaking."

This list of terms may be compared with a list given by Taplin (Bibliography, p. 169), which was probably obtained from the *Ḭayuruku* tribe. Two other lists of relationship terms from the same tribe or from the neighbouring tribes are given on p. 158 of the same work.

A comparison of the terms given above with those of the *Yaralde* shows that there is some similarity between the systems, a few of the terms being nearly the same (*yatta* = *yaitya*, *paku* = *baka*, etc.). However, what little information I was able to collect seems to show that there were important differences between the *Yaralde* and the *Ḭayuruku* systems. One or two interesting features of the latter system may be briefly noted.

A woman applies the term *noidla* to her father's mother and to the brothers and sisters of the latter, and also to her husband's mother and to her son's wife. Her son's children are also *noidla* and their children again are *noidla*. A woman calls her husband's father *metṣa*, that being the term she also applies to a father's father. She also calls the wife of her *napmap* (brother's son) *metṣa* and the children of this pair are again *metṣa*.

These peculiarities at once suggest that there may be in the *Ḭayuruku* tribe some trace of the dual division which is found in tribes higher up the river (the *Maraura*, for instance), but which is entirely absent in the *Yaralde*. This may be seen from the following diagram:—



This diagram shows the relatives of the woman A1. If there were a dual division with female descent in this tribe, all those shown as A in the diagram

would belong to the same moiety of the tribe as the woman herself, and those marked B would belong to the other moiety. It will be noticed that the woman applies the term *metša* only to persons marked A, such as her father's father (A3), husband's father (A5), brother's son's wife (A8), and brother's son's children (A 10 and 11); whereas she applies the term *noidla* only to those marked B, such as her mother's father (B4), husband's mother (B6), son's wife (B9), and son's children (B 12 and 13).

These peculiar features suggest that the *Ḫayuruku* tribe might at one time have had the dual division with female descent. Although the surviving members of the tribe are well acquainted with the *Kilpara* and *Mäkwara* divisions of the *Maraura* tribe and other tribes up the river, and the *Krokid* and *Kamaḏ* divisions of the tribes to the east of them, yet I could not discover that the *Ḫayuruku* tribe itself had similar named divisions.

With reference to the totemism of this tribe it may be noted that personal names always have some connection with the person's totem.

Thus a member of the cod-fish clan is named *Bakara* from a word referring to the gills of the fish.

Bibliography.

- (1) Taplin (Rev. G.), *The Folklore, Manners, and Customs of the South Australian Aborigines*. Adelaide, 1879.

Taplin speaks of the *Meru* "tribe," and includes under that name the *Ḫayuruku* and the other tribes higher up the river, all of which use the word *meru* to mean "man."

8.—*Ḫaiyan*.

The *Ḫaiyan* tribe formerly occupied the banks of the *Murray River* about the North-West bend. The language and social organization were apparently similar to those of the *Ḫayuruku*.

The following terms of relationship are extracted from an early vocabulary by Moorhouse (Bibliography 1) of what he calls the *Meru* tribe. This word *meru* is the word for "man" in the *Ḫayuruku* and *Ḫaiyan* languages, and probably in those of the *Nanait*, *Yiran*, *Yuyu* and *Ḫintait* also. I was told by the natives who remember him that the language Moorhouse knew best was the *Ḫaiyan*. The original spelling is retained:—

<i>bāūkai</i> , grandmother on mother's side.	<i>narnatower</i> , name for a relative.
<i>bāāko</i> , grandchild.	<i>neneruongko</i> , name for a relative.
<i>loangko</i> , a wife.	<i>noilya</i> , grandmother.
<i>lunko</i> , name for a relative.	<i>noilyawur</i> , grandchild of the <i>noilya</i> .
<i>markilakko</i> , two brothers.	<i>nukko</i> , uncle.
<i>marrukko</i> , elder brother.	<i>nukkuwur</i> , father.
<i>metei</i> , grandfather on father's side.	<i>ngaimetti</i> , mother-in-law.
<i>metto</i> , grandchild.	<i>ngaingakka</i> , my mother (<i>ngaiyo</i> = my)

<i>ngaiyopitti</i> , my father.	<i>pangur</i> , stepfather.
<i>ngakkai</i> , thy mother.	<i>pangkai</i> or <i>pangko</i> , younger brother or sister.
<i>ngammaityu</i> , woman, female.	<i>pangwun</i> , name of a relation.
<i>ngatta</i> , grandfather on the mother's side.	<i>petuwarra</i> , father.
<i>ngatto</i> , grandson of the <i>ngatta</i> .	<i>pewi</i> , husband.
<i>ngawur</i> or <i>ngakur</i> , mother.	<i>pitai</i> , thy father.
<i>ngurlo</i> , mother-in-law.	<i>reyu</i> or <i>reiya</i> , a child.
<i>pamkalpo</i> , son-in-law.	<i>waumai</i> , father-in-law.
<i>pammo</i> , nephew.	

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Moorhouse (M.), *A Vocabulary and Outline of the Grammatical Structure of the Murray River Language, spoken by the natives of South Australia, from Wellington, on the Murray, as far as the Rufus.* Adelaide, 1846. pp. viii + 64.

9. *Nauait.*

A tribe which occupied the banks of the Murray River between Boggy Flat and Loxton. The social organization was probably of the same general type as that of the Yaralde and Januruku tribes.

Bibliography.

- (1) Taplin, *Folklore, etc., of the South Australian Aborigines*, 30. A few brief notes on this tribe, of little value, are given in Taplin's work. The name of the language is given as Niawoo. I have heard the name pronounced in a way that might be rendered by this spelling, the final *t* being sometimes slurred in speaking.
- (2) Curr, *Australian Race*, II. 278.

The vocabulary given from the North-West bend of the Murray River is possibly from this tribe.

10. *Yirau.*

This tribe formerly occupied the banks of the Murray River between Loxton and Paringa. I have no information about the social organization.

11. *Yugu.*

A tribe formerly living on the Murray River above Paringa. There is nothing known about the social organization.

Bibliography.

- 1) Taplin, *Folklore of the South Australian Aborigines*, 28.

Brief information about this tribe is given on the authority of Corporal Shaw. The name of the language is given as You-you.

12. *Dintait.*

A tribe formerly occupying the country on both sides of the Murray River, below Salt Creek about Ned's Corner Station. I have no exact information about

the social organization, but I believe that the tribe had no dual division and was organized into local totemic clans in much the same way as the Danuruku and Yaralde tribes.

Bibliography.

(1) Curr, *Australian Race*, II, 280.

Curr gives a vocabulary, probably from this tribe, contributed by A. H. Pegler

13.—*Maraura.*

The Maraura tribe formerly occupied the country around the junction of the Darling and Murray rivers, apparently extending down the latter as far as Lake Victoria. The natives around Lake Victoria were known as Yakumku, but this is probably the name of a local subdivision (sub-tribe) of the Maraura.

The Maraura tribe had the dual division, the moieties being named Kilpara and Mākpara (or Mākpara). I understood from a man of this tribe that a child belongs to the mother's moiety, but Holden (Bibliography 1) says that "the children in most cases take the father's class name, but at times the mother's. What rules the matter it is very hard to say for certain." Every individual has one or more totems which he inherits from his mother. The Maraura term for totem is *tapi*. My informant told me that his totems were *kanau* (eaglehawk), *namba* (silver fish), *puḍali* (a star) and *pitta* (opossum), this being the order in which he mentioned them. He could not remember his father's totems. He himself belonged to the Kilpara moiety. He had married (against tribal law) a woman of the same moiety as himself. Her totem was the Murray cod, *pārudu*. The totem, if it be edible, may be eaten by the person whose totem it is.

I was not able to work out the system of relationship, but I collected a list of terms.

<i>kambia</i> , father.	<i>yaiṇmia</i> , father's sister, sister's son's wife.
<i>yamaga</i> , mother.	<i>yundi</i> , mother's brother's son.
<i>matiya</i> , father's father, son's son.	<i>kuliri</i> , wife's mother.
<i>kaiṇta</i> , father's mother.	<i>yunduwa</i> , wife's father, daughter's husband.
<i>yatta</i> , mother's father, daughter's son and daughter.	<i>tanguwa</i> , wife's brother.
<i>kakwia</i> , elder brother.	<i>nuyai</i> , wife.
<i>wituwa</i> , elder sister.	<i>mambu</i> , wife's sister, brother's wife.
<i>paluwa</i> , younger brother.	<i>wimbara</i> , son, daughter.
<i>kaiṭyaya</i> , younger sister.	<i>kiiwia</i> , sister's son.
<i>wakia</i> , mother's brother.	<i>tawana</i> , son's wife.

The above terms are in all cases those used by a male. The list is to be compared with that given by Taplin (Bibliography 1, 167, 168).

So far as I could learn it seemed probable that the tribe had a relationship system of type II, but this could not be determined with certainty. In Taplin's work it is stated that a man may marry his mother's brother's daughter, but I

certainly think that with the above list of terms before us we are justified in suspecting that this statement may be erroneous.

Bibliography.

- (1) Taplin, *Folklore, etc., of the South Australian Aborigines.*

Information about the "Maraura" tribe is given by Rev. R. W. Holden in the form of answers to questions (pp. 17-28). A list of terms of relationship is given (pp. 167, 168).

- (2) Curr, *Australian Race*, II, 238.

A vocabulary of the Maraura language was contributed to Curr's work by John Bulmer. The tribal name is given as Marowera.

- (3) Howitt, *Native Tribes of South-East Australia.*

The tribe is mentioned under the name Wiimbaio. The word *wimbaia* is the term for "man" in all the languages of the Darling River including the Maraura. It is not a tribal name.

14. *Karin.*

This tribe is also known by the names Karinma and Pintwa, the latter being the word for "No" in the language of the tribe. It formerly occupied the country on the north bank of the Murray River between the Taŭi-taŭi and the Maraura tribes. We have no information about the social organization.

Bibliography.

- (1) Curr, *Australian Race*, II, 282. Curr gives a vocabulary of what he calls the Kemendok language, described as extending from Mallee Cliffs Station to Wentworth. This is most probably from the Karin tribe.
- (2) Howitt, *Native Tribes of South-East Australia*, 52. The tribe is mentioned by the Karinma, but no information is given about the social organization.

15. *Laitu-laitu.*

This tribe formerly occupied the south side of the Murray River below Euston. I met with one man of the tribe in 1914, but he had been away from his own country for many years and was not a reliable informant.

The tribe is divided into two moieties named Kailpara and Mākware. A child belongs to the mother's moiety. My informant told me that there was a special connection between Kailpara and the emu and a similar connection between Mākware and the eagle-hawk. It appears that there are totems inherited in the female line, the totem of my informant being *manul*, a bony fish.

Bibliography.

- (1) Howitt, *Native Tribes of South-East Australia.* The tribe is mentioned by the name Leitchi-leitchi, but no information is given as to the social organization.
- (2) Beveridge, in *Journ. Roy. Soc. of New South Wales*, XVII (1883), 19, 71. The tribe is mentioned by the names Litchy-Litchy and Litchoo-Litchoo.

16.—*Taŭi-taŭi.*

This tribe, which formerly occupied the north bank of the Murray River between Euston and Wentworth, is also called Ta-taŭi and Yitŭa, the latter being the term for "No" in the language of the tribe.

The tribe is divided into two moieties named Kailpara and Makwara. A child belongs to the mother's moiety. There are totems which are inherited in the female line. The totem of my chief informant was *tamburay*, the frilled lizard. I was not able to determine the system of relationship. A list of terms is given below. The spelling is only approximate, as the phonology of this tribe is very difficult.

<i>met</i> , father's father.	<i>mahi</i> , elder sister.
<i>mim</i> , father's mother.	<i>raiya</i> , son, daughter (male speaking).
<i>pkka</i> , mother's mother, mother's mother's brother.	<i>pamma</i> , sister's son and daughter (male speaking).
<i>yatai</i> , mother's father.	<i>runt</i> or <i>runtai</i> , mother's brother's son and daughter.
<i>bet</i> , father.	<i>malol</i> , wife.
<i>yak</i> , mother.	<i>lun</i> , wife's mother.
<i>kuau</i> or <i>kwau</i> , mother's brother.	<i>yul-yul</i> , wife's father, daughter's husband (male speaking).
<i>yarul</i> , father's sister.	<i>mam</i> , brother's wife.
<i>ywait</i> , father's brother.	<i>natuyak</i> , son's wife (male speaking).
<i>kum</i> , elder brother.	
<i>yān</i> , younger brother, younger sister.	

This list of terms suggests that the tribe had a system of relationship of Type II similar to that of the Waṭi-waṭi tribe.

Bibliography.

- (1) Cameron, "Notes on Some Tribes of New South Wales," in *Journ. Roy. Anthropol. Inst.*, vol. xiv.
- (2) Curr, *Australian Race*, II, 285.
Curr gives a vocabulary by J. A. Macdonald from the tribe which he calls Yit-tha, which I believe to be the same as the Taṭi-taṭi or Ta-taṭi.
- (3) Howitt, *Native Tribes of South-East Australia*. Howitt mentions the tribe by the name Ta-taṭi.

17. *Waka-waka*.

A tribe named Waka-Waka, or Wakaua, formerly inhabited the banks of the Murray River about the junction of the Murrumbidgee. *Waki* means "No" in the language of the tribe. I have no information about the social organization.

Bibliography.

- (1) Howitt, *Native Tribes of South-East Australia*.

The tribe is mentioned by the name Weki-weki.

18. *Māṭi-māṭi*.

A tribe called Māṭi-māṭi, or Māṭana, from its word for "No" (*māṭi*), formerly occupied a part of the Murrumbidgee River above the Waka-waka. I have no information about the social organization.

Bibliography.

- (1) Howitt, *Native Tribes of South-East Australia*, 50, 52. The tribe is mentioned by the name Muthi-muthi.

APPENDIX I.

A Note on the Clans of the Narrinyeri.

For the sake of those who may wish to compare the account given here of the social organisation of the Yaralde and neighbouring tribes with earlier published accounts, I reproduce below the list of the clans of the Narrinyeri given by Howitt in his *Native Tribes of South-East Australia*. Howitt based his list on the earlier list published by Rev. George Taplin, but added some information obtained by Mr. F. W. Taplin. Taplin's original list is to be found in Woods' *Native Tribes of South Australia*, p. 2.

Name of Clan.	English of the Name.	Totem.
Bamir-inyeri ...	<i>rumaii</i> , the west ...	<i>wirulde</i> or <i>tangari</i> , wattle gum
Tanganarin ...	where shall we go? ...	<i>manguritpuri</i> , the pelican, or <i>nori</i>
Kandarl-inyeri ...	whales ...	<i>kandarli</i> , whales
Lungundaram ...	seaside men ...	<i>tyellityelli</i> , fern
Turarorn ...	coot men ...	<i>turi</i> or <i>tettituri</i> , coot
Park-inyeri ...	deep water ...	<i>kunguldi</i> , butterfish
Kanmerarorn ...	mullet men ...	<i>kanmeri</i> , mullet
Kaikalab-inyeri ...	watching ...	(1) <i>ngulgar-inyeri</i> , bull-ant (2) <i>pingi</i> , a water-weed
Mungul-inyeri ...	thick or muddy water ...	<i>wanyi</i> , chocolate sheldrake
Rangul-inyeri ...	howling dog ...	<i>turiit-pani</i> , dark-coloured dingo
Karat-inyeri ...	signal smoke ...	<i>turiit-pani</i> , light-coloured dingo
Pilt-inyeri ...	ants ...	<i>maninki</i> , leech <i>pomeri</i> , cat-fish <i>kalkalli</i> , a lace-lizard
Talk-inyeri ...	fulness ...	? leech ? cat-fish
Wulloke ...	Artemus sp. ...	<i>tiyawi</i> , a lace-lizard
	the wood-sparrow ...	? leech ? cat-fish ? a lace-lizard
Karowalli ...	gone over there ...	<i>waiyi</i> , whip-snake
Punguratpula ...	place of bulrushes ...	<i>peldi</i> , musk duck
Wel-inyeri...	belonging to itself or by itself	<i>nakare</i> , black duck
Luth-inyeri ...	belonging to the sun-rising	<i>ngumundi</i> , black snake with red belly <i>kungari</i> , black swan <i>ngeraki</i> , seal <i>kikinummi</i> , black snake with grey belly <i>nakkare</i> , black duck
Wunyakulde ...	corruption of <i>walkande</i> , the north	
Ngrangatari or Gurrungwari	at the south-west or at the south-east	<i>waukawaye</i> , kangaroo rat

Bamir-inyeri.—This seems to be meant for the name given as Raminyeri by Taplin, the B being a misprint and the extra syllable -ir perhaps having been inserted in error. It is the Raminderar clan of Encounter Bay. Meyer, who

knew the clan well gives the name as Raminjerar and states that it is derived from the place Ramong which was the headquarters of the clan, the name meaning "those who belong to Ramong." My information on this point confirms the statement of Meyer. Howitt gives the totem as wattle-gum, and this agrees with Taplin's original list, but Meyer states that the totem (patron or protector he calls it) was thunder. It is of course possible that thunder and wattle-gum were both totems of the same clan.

Tanganarin.—This is one of the names of the Tapanalun tribe, which contained many clans. The name is derived from *Tayarwalayan* ? "Where shall we go?" just as *Yaralde* is derived from *Yarawalayan*. It may be noted here that Taplin (*Folklore of the South Australian Aborigines*) mentions the Yarilde-thinggar (i.e., the Yaralde language) as a "clan" of the Narrinyeri, although he does not give it in his list of clans.

Kandarlinyeri.—I was told by the natives that Kondarlinderi (the place of whales) is merely the name of a part of the country occupied by Pankinderar clan, and that there is no clan of this name.

Lungundararn.—This is the clan I have called Lungundinderar (those belonging to Lugundi). The alternative name given by Howitt is formed with the plural suffix *-ar* and the suffix *-orn* (*Kom*), meaning "men," and so means "the men of Lugundi." Howitt gives the totem as *tyellityelli*, fern, the latter word being a misprint for "tern," while the native word seems to be that which I have written *tenileri*.

Turarorn.—This is the Yaralde clan that I have given in my list under the same name.

Park-inyeri.—This seems to be a misprint for Pankinyeri, given in my list as *Pankinderar*.

Kenmerarorn.—This, from my own information, seems to be a clan of either the Yaralde or the Tapanalun, but I was not able to obtain reliable information about it.

Kaikalab-inyeri.—Kaikalabinderar is the name of a Tapanalun clan of which I did not discover the totems. According to my information the bull-ant is the totem of the Kargarinderar clan, and this is confirmed by a statement of Meyer. It is just possible that Kaikalabinderar and Kargarinderar are two names for the same clan.

Mungul-inyeri.—Mupulinderar is a general name for all the clans on the north-east side of Lake Albert, and not the name of a single clan. The chocolate sheldrake (or mountain duck) is the totem of the Mulberaperar.

Rangul-inyeri.—Although Taplin spells the name thus, I always heard the natives, including a member of the clan, pronounce it *Ragurinderar*, in which form it appears in my list of Yaralde clans.

Karat-inyeri.—This is the *Karatinderar* of my list.

Pilt-inyeri.—This is the *Piltinderar* of my list. Howitt says the name means "ants," but I was assured by the natives that it means "those belonging to Piltapik,"

this being the name of a place belonging to the clan. It is of course possible that the name *Piltapik* has some connection with ants.

Talk-inyeri.—Not given in Taplin's list. I have no information about it.

Wuloke.—Not mentioned in Taplin's list. I was told that *Wuloke* is the same as *Yankinderar*. My informant said that *wuloke* is the name of the black cockatoo.

Karowalli.—In Taplin's list this is spelt *Korowalle*. I always heard it pronounced *Korowalde*. It was probably the name, not of a clan, but of a tribe or collection of clans, of which one may have had the whipsnake as its totem.

Punguratpula.—In Taplin's list this is spelt more correctly *Punguratpular*. It is a clan of what I have called the *Koraulun*, or *Korowalde* tribe.

Wel-inyeri, *Luth-inyeri*.—These are clans of the *Portaulun* tribe, about which I have no information. The second is spelt *Lathinyeri* by Taplin, and the alternative is probably only a misprint. In the list of totems *Howitt* has "seal" where Taplin gives "teal"—clearly a misprint in *Howitt*.

Wunyakulde.—*Howitt* says that the name is a corruption of *walkande*, the north, but I doubt this. The *Yaralde* use the name *Walkandawani* to denote the natives of the *Murray River*, but they also use the name *Wanakalde* (*kald*=people) or *Wanaulun*, to denote the *Djaraltu* tribe, or perhaps a part of that tribe. It seems that a powerful clan of that tribe had the black duck as its totem.

Ngrangatari.—This is given in Taplin's list as the name of a clan at *Lacepede Bay*, which is part of the country occupied by the tribes having the dual division with the names *Krokid* and *Kamad*. If we confine the name *Narrinyeri* to those who use the word *yarinderar* for "men," then neither the *Wunyakulde* nor the *Ngrangatari*, even if these are the names of clans, are to be included in the *Narrinyeri*.

SOME ASPECTS OF NĀYAR LIFE.

By K. M. PANIKKAR.

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NOTE.—I have not attempted here to write anything like a detailed study of the Social Life and Customs of the Nāyars. My purpose in this Essay has been mainly to put together a few facts which do not seem to have been sufficiently dealt with by previous writers. It is therefore offered rather as supplementary notes than as an original contribution.

I have everywhere depended upon my own observations as to matters of detail. Wherever I have ventured either to suggest new interpretations or to question old theories my authorities generally are eighteenth-century Malayalam poets, who describe the Nāyar Society of the time with great accuracy and detail. My debt to various anthropological classics is evident, and I have acknowledged it everywhere in footnotes.

I.—INTRODUCTORY.

THE Nāyar country extends traditionally from Gokarnam to Cape Camorin along the littoral of the Arabian Sea. The geographical position of the country is very important. The Western Ghats, which extend from near Bombay down to Cape Camorin, attain near the Malabar country the character of a mountain range studded

with high and noble peaks. These shut the Nāyar country entirely out of the rest of India and have helped to a very great extent to preserve the peculiar customs of marriage and relationships of Malabar. The monsoon which these Ghats receive makes Malabar the most picturesque part of India, an ever green country with lofty trees, luxuriant vegetation, noble rivers and magnificent lakes. There is nowhere a place which so much approximates to the description of

"Larger constellations burning, mellow moons and happy skies,
Breadths of tropic shade and cluster knots of paradise ;
Droops the heavy blossomed bower, hangs the heavy fruited tree,
Summer isles of Eden lying in the purple sphere of sea."

The extreme fertility of the valley and the rich tropical luxuriance of the forest have made life extremely easy, which even the importation of machines, mills, and factories has not been able entirely to change. Malabar is to a great extent, therefore, a land of idleness, and I may say of intellectual culture, for nowhere is learning, art, and poetry so much esteemed as among the Nampudiris and Nāyars of Malabar.

There are various reasons to believe that the Nāyars were very early comers in this place.¹ That they were not the aboriginal inhabitants of the place is evident from the fact that all over Malabar, from Mangalore to Cape Camorin, Nāyar families possess agricultural serfs who are distinctly of the negroid type. The Nāyars are a Dravidian race whose culture has only been superficially influenced by the Aryan immigration ; of this more later.

The other communities of Malabar among whom the Nāyars live, are the Nampudiris, the Tiyaas and the Pulayyas. The Nampudiris are Brahmin landlords whose intercourse with and influence on the Nāyars we shall have to consider in detail later. A few families of Kshatriyas form the petty royalty of Malabar. The Tiyaas are toddy drawers, people who are free men in theory but still show traces of serfdom in their relation with Nāyars, living as their tenants and doing their work for them. And the Pulayyas, who till lately were slaves on whom was built up the agricultural life of the country. There are innumerable minor tribes, but they are small communities differentiated on the basis of their profession, like the Kanyans (astrologers), Asaris (carpenters), etc.

In this order Nāyars come next to the Brahmins and Kshatriyas and have precedence over all other castes. They are considered generally as a Dravidian variety of the Aryan Kshatriyas, which is, however, absolutely spurious in theory and is true only in so far as their *de facto* position is concerned. Any way, they form the feudal aristocracy of Malabar. Burke on a famous occasion classed them with

¹ See note at the end of the essay, on "The Origin of the Word Nāyars," Appendix. Note 1.

the Mamalukes of Egypt.¹ Camoens, the Milton of Portugal, described them in these lines :—

“ By the proud Nāyars noble rank is claimed ;
The toils of culture and of art they scorn,
The shining falchion brandished in the right,
Their left arm wields the target in the fight.”

As a matter of fact, the Nāyars as a military aristocracy have been famous ever since Marco Polo travelled in Asia.

“ In this region of Malabar,” says Gaspar Correa, writing on the three voyages of da Gama,² “ the race of Gentlemen is called Nairs who are people of war. They are people who are very refined in blood and customs and separated from all other people. So much do they value themselves that no one of them ever turned a Moor.”

“ Of these Malabars there are two manner of people (the one is) Noblemen called Nāyars which are soldiers and do only weare and handle arms and the other is the common people called Polayas. The Nayros must [in all places] where they go or stand weare such arms as are appointed for them and alwaies be ready at the King's commandement.

“ As these Nayros go in the streets they cry po ! po ! which is to say take heed I come, stand out of the way.”³

Historical circumstances have also had their share in the abundance of material which foreigners have left with regard to the Nāyars. Malabar was the seat of Arabic trade, and the Portuguese first landed at Calicut. During the hundred and fifty years of Portuguese power in India they had dealings mostly with the Zamorin of Calicut, the Rajah of Cochin, and the Deva Narayana, Rajah of Prakaud. That was the land from which spices came, and the Portuguese, therefore, were interested in the petty politics of these principalities. The Dutch, who followed then, also had their main interest on the mainland of India centred on Cochin, and in the first beginnings of English commerce, also, Malabar had a share. Apart from these a number of observant travellers has visited the seaboard of Malabar.

But though material of a kind is, therefore, abundant, it is found on closer examination to be unscientific and unreliable. The Nāyar Society of the eighteenth century, or an age previous to that, cannot be reconstructed from the observations of either Duarte Barbosa or Vinschar. An accurate and scientific description of the state of society prevalent before European contact is possible only after a thorough and searching study of Nāyar literature. Camoens' description of the Nāyars as scorning the toils of culture is not true. Malayalam has an extensive

¹ Had they (the French aristocracy) been like the Mamalukes of Egypt or Nāyars of the coast of Malabar. (*French Revolution*, p. 148, *World's Classics*.)

² *Voyages of Vasco da Gama*, Hakluyt Soc., vol. i, p. 185.

³ *Voyage of Linschoten to the East Indies*, translation of 1598. Edited by Hakluyt Soc., vol. i, p. 278 *et seq.*

literature, and it has been developed almost entirely by the Nampudiris and the Nāyars. The following essay is based on an examination of eighteenth-century literature. As far as it treats of present customs and ceremonies it is based on the personal experience and observations of the writer.

II.—THE VILLAGE ORGANIZATION OF THE NĀYARS.

A clear understanding of the life and customs of the Nāyars is impossible without an adequate idea of the strength of their village organization. In this connection it is necessary to make an important distinction at the very start. The village organization in Malabar is utterly unlike the village communities in British India, and therefore should not be confused with them.¹ Malabar has no *village community*: it has only a *village organization*. To make the distinction clearer: in British India, in general, there are communities grouped together in a village, generally owning land in common and dealing with other villages as units. But in Malabar individual property, in the ordinary legal sense, is universal, and the village organization comes in only for specific purposes such as the management of the temple affairs and, in olden days, for military training and mobilization.

Another distinction is that the Malabar village organizations include only Nāyar families, though in the same village there may be Christians, Ezhuvs, and Jews. For purposes of communal life other castes are outside the village organization. All these castes, except the Parayas, the Pulayas, and all those who were, till the abolition of slavery, in bondage to their masters, live side by side. Another point to remember in this connection is that Malabar villages are not like British Indian villages, built according to a plan. Each house in a Malabar village stands apart in a separate compound and in each compound generally there is a house. It might happen that the compound nearest a Nāyar's house is occupied by a Christian. But as far as the village organization is concerned the non-Nāyars do not exist.

Malabar in olden days was divided into ten or twelve states, each of which was ruled by a Rajah. These states were divided into *Nads* (countries); each of these *Nads* consisted of certain *Dēsams*; and the *Dēsams* were subdivided into *Amsas*. Later administrative division has abolished the first two to a great extent, though they survive in popular speech and in poetic language. But the *Amsas*, or villages, are wholly intact even now; indeed they form the unit of administration. Before the British conquest and the division of Nāyar country into three parts, British Malabar, Cochin, and Travancore, Nāyar society was built up on a feudal basis. Each of the *Nads* was under the control of a local magnate called *Nadu Vazhi* (the ruler of the *Nad*). He had criminal and civil jurisdiction and the right to claim

¹ Cf. Matthai, *Village Government in British India*. T. Fisher Unwin, 1915.

military service from the Nāyars under him. The *Nadu Vazhis* kept a local force varying between five hundred and one thousand men, which they were obliged to put into the field at the command of their Rajah. The *Nadu Vazhis* were kept under control by the Rajah when he was able to do so. But in any case they were bound to fight for him. Below these *Nadu Vazhis* were *Desa Vazhis* (lords of the Manor). They had the right of keeping a *Kalari* or a military academy. In each village there was one *Desa Vazhi* (sometimes more), who was called master (*Asān*) by the Nāyars. He was their military preceptor in peace time and their leader in war time.

The principal business of the *Desa Vazhi* was to train the young men of *Desa* in his *Kalari*. All Nāyar boys after twelve were supposed to attend the *Kalari* and learn boxing, fencing, sword play, military formation, and the ordinary rules of warfare. For such training the *Desa Vazhi* was not paid. After eighteen the boys were not supposed to attend the *Kalari*, but were required to be ready to start for war at a day's notice.

The *Kalaris* are still in existence. Even now the Nāyar young men who do not go to English schools get some sort of a training with imitation swords and shields, because swords are prohibited by the Arms Act. In certain families one male member has to be proficient in this art so as to be able to teach the others. The *Kalaris*, though now visited by people only for the extreme beauty of their architecture, are still used by the Nāyars of the *Desas* as places of worship.

On the festival days in the village temple the Nāyars, who have been thus trained, even now hold a review in martial array (*vēla*). In Trivandrum, which is the capital of the Maharajah of Travancore, this feature is very prominent. In other places there are still *Patayanis* (*Pata*=war, *ani*=to get ready). All the Nāyars of the surrounding districts assemble, and the ceremonies which in former days stood for military manœuvres are held with great enthusiasm.

The centre of all the martial and, consequently, of the social life of the Nāyars is, therefore, the *Desa*. In each village there is a temple owned by the community. The temple is generally self-supporting, and occasionally very rich. The temple authorities are appointed by the village. The power is generally vested in the *Pramanis*, or the chief men. In each village there are certain families who have the right of being consulted in all matters connected with it. The head of these *Pramanis* is the Lord of the Manor.

In describing the organization of the village, it is better to take one practical example which is typical. Kavalam is such a village. I shall, therefore, confine myself to the description of the organization of that village.

The village is supposed to consist of one hundred and fifty houses. This is the traditional number, but at least fifty of these have emigrated. But though they live in other parts of the country they are still considered to belong to this organization. In all the ceremonies that require the sanction of the village the emigrant,

unless he has been admitted by certain formalities to the village to which he has emigrated, is considered to belong to his original home.

The village is divided into two *Karas* (or *Amsams*), the northern *Kara* and the southern *Kara*. The division is arbitrary and has no significance. A man from Kavalam belonging to the North or South *Kara* is treated in another village as belonging to the same place.

The *Bhagavati* (goddess) Temple in the village was, before the government took possession of it, owned by two *Karas* jointly.

In each of the *Karas* there are five *Āsāns* or *Pramanis*. They keep *Kalaris* and are honoured and respected by all the Nāyars in the district. No common Nāyar is allowed to sit in their presence, to enter their kitchen, or to call their women without the title of *Kunjamma* (or Ladyship).

The seventy-five families which the *Kara* contains are divided between the five *Āsāns*. Each *Āsān*, therefore, has a general authority over all the families, and special rights over the fifteen families immediately under his control.

In all matters of ceremony the *Āsāns* have to be informed beforehand. Without their presence, no public ceremony of any family is supposed to be valid. All the public functions of the village are done by them. The ceremonies of the temple, for example, are under their control. They are the people who summon the *Karakkars*, or the villagers, to assemble and settle matters of importance. The villagers settle, in such assemblies, things relating to the community, such as public festivals, the expenditure of *Karayogam* (common to the village) funds and the behaviour of people who have acted against the customs of the village. If a marriage ceremony had not been properly conducted, it comes before them. If an *Āsān* had not been properly invited, that matter also comes up for consideration. Instances of punishments inflicted by the village on individuals and families were not uncommon till lately. I remember a particular case in which the villagers as a body led by their *Āsān* walked out of the marriage (*Talikettu*) *pandal* because the order of precedence was not kept up. The family of a squire had, during these hard days, become poor, and a rich squire who, in order of precedence, came below him was given a seat of honour. The result was that the whole community walked out as a protest, and the *Kalyanam* had to be held over again to the satisfaction of the poor *Āsān* and his loyal friends.

How strong this organisation is will be seen from the following incident. A gentleman, when coming from Madras, had a Christian friend with him, and his servant who waited for him at Alleppey was eating his food when both of them entered the boat. It is a very rigid custom that no food can be taken in the company, or even in the proximity of any lower caste, and Christians are considered to be such. The result of it was that when they got home the news got abroad that the Nāyar servant had eaten with a Christian in the boat, and the whole village

was in a state of terrible fury. It was only with great trouble that they were persuaded not to excommunicate the poor man.

The Nāyar life and customs can be rightly understood only in the light of their village organisation. The enormous influence the opinion of the village has in all matters connected with their social, as well as their family, life is the main reason of the persistence of the Nāyars as a vigorous and healthy community in spite of strong economic pressure, merciless competition and fast changing conditions. It is also due to this system of organised life that the customs of sexual relationship and marriage, which look so loose and immoral on paper, are found actually to be decent and tolerable. The Nāyar community is not more immoral than any other community in the world. The restraining influence among them does not come from actual written law, as among the Hindus of other parts of India, or from a belief in any social philosophy present in the mind of at least the leaders of thought. It comes from the strong feeling of social propriety which the village has developed to a very high degree.

III.—FAMILY LIFE AMONG THE NĀYARS.

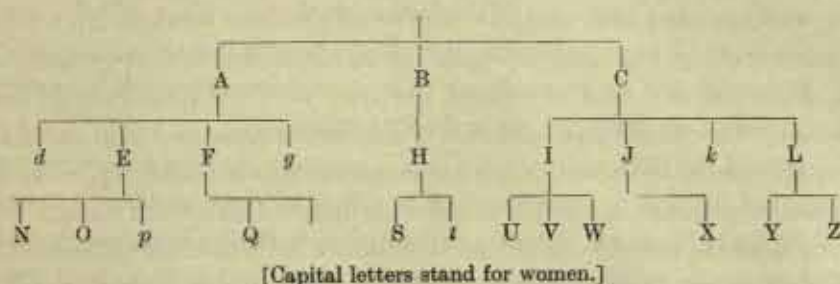
The Nāyar family consists of all the descendants from the same ancestress, counting relationship exclusively from the side of the mother. Theoretically it may contain all those who have a common ancestry of this kind, but, in practice, when families grow unwieldy, they divide the common property and live under different roofs. Ordinary families consist of relations four or five degrees removed. The numerical strength of the family varies. In old and aristocratic families one finds sometimes fifty to eighty people, though one or two families can be mentioned in Malabar which contain one hundred and fifty to two hundred people.

The undivided family generally lives under the same roof. In the house itself only the females live, while the male members of the family occupy rooms set apart for them, or, if they are rich, live in houses in neighbouring compounds. The Nāyar house has always a large piece of enclosed ground in front of it, which is called *Muttam*. Often it is used as an ornamental garden, and no man of the lower caste may enter it. There the children walk about and play in daytime, and the women have their dance and general merriment in the evening. Behind the house is a vegetable garden and a bathing tank, which is reserved exclusively for women. The dominant idea in the arrangement of the house is the proper separation of sexes in the family.

The family owns property in common. What a private individual earns belongs to him exclusively, but when he dies it is joined to the rest of the family, according to the old Nāyar law which is still prevalent in some parts.¹ When the

¹ Legal tendency has been to modify this practice.

family becomes unwieldy, or certain members show insubordination, the family property is partitioned equally among *each female line*. That is to say, if there are three sisters in the family, each having daughters and granddaughters, the partition is done in such a way that each of the ancestresses founds a separate family among whom the original property is equally divided. It is best explained by a diagram :—



In this case, supposing A, B and C dead, and the eldest male member *d*, being *Karnavan*, the male members, *t*, *k* and others demand partition. The joint property will be divided equally into three parts, each of the groups, in spite of their numerical difference, getting equal shares. Now, in the first group, there are two subdivisions to be made, while, in the third group, the property has to be further divided into three. Group 2 has only one female line, and, therefore, in that line, the property remains intact.

The partition of property does not affect the relationship. The members of a divided family are still called by the classificatory names, and a birth or death in one family creates pollution to the whole stock. Centuries might pass, but they would still remain strictly exogamous groups, and the rights of relationship (such as pollution, etc.) would continue, though in a lesser degree. There are many instances in which, though family partition took place at least a hundred and fifty years ago, the members continue to call each other brothers and sisters, as if they were the nearest blood relations.

It may be noticed in this connection that a Nāyar young man or woman is not supposed to talk to any relations of the opposite sex in the same family *if they are of almost the same age*. A younger brother can talk to a sister considerably older than himself; but under no conditions may he talk to a younger one, and in orthodox families this restriction is carried so far that if it is known that a brother is standing somewhere near, the sister scrupulously avoids him. It is the custom that after the *Talikettu kalyanam* the brother (own and collateral alike) is not supposed to see, talk to, or be in the same room with his sister. This involves considerable inconvenience, for, if the mother is dead and there is no one of *her generation* living, a man loses all touch with the family, because his sisters and women of that generation may not speak to him, and he may not go near them. In such cases, it is customary

for young men to go and stay in their wives' houses and visit their own families for business arrangements.

Authority in the family is wielded by the eldest member, who is called *kārnavan*. He has full control of the common property, and manages the income very much as he pleases. He arranges marriages (*sambandhams*) for the boys as well as the girls of the family. He had till lately full power (at least in practice) of alienating anything that belonged to them. His will was undisputed law. This is, perhaps, what is intended to be conveyed by the term *Matri-potestas* in communities of female descent. But it should be remembered that among the Nāyars the autocrat of the family is not the mother, but the mother's brother.

The power of the *Kārnavan* over the family property has always been, in theory, limited, because the property was supposed to belong to every member of the family jointly. Till lately, however, it was practically impossible to limit the *Kārnavan's* power of mortgaging or even fully alienating it, because when it came to litigation the *Kārnavan* always pleaded that such action as he took was necessary for the welfare of the family, and justified himself by basing his arguments "on the discretionary power" vested in him. However, the old theory has lately been asserted in law that a *Kārnavan* can sell or mortgage the property only with the consent of the other members of the family.

All the moneys owing to the family can be paid only through him. He alone can give permission for the use of what belongs to the family. He can punish all the members of the family, either by depriving them temporarily of their allowance, or by prohibiting them to enter the house. In short, he is virtually the head of a tribe rather than the senior member of a family.

The Wife of the Kārnavan.—The wife of the *Kārnavan* has no standing in the family; yet as is but natural, she is supposed to be a dark and sinister force working against the interests of the *Tharavad*. Since she does not belong to the *Tharavad* of her husband she has no interest in its well-being, and it is generally supposed that the *Ammāvi* (the wife of the maternal uncle) is interested only in getting as much out of her husband's family for her own children as her influence over her husband allows. All the tales told to children have as the villain the *Ammāvi*, whose position is not only that of the wife of the maternal uncle, but also the mother-in-law of the brother. She is universally considered to be a sort of sinister step-mother.

But it must be acknowledged that the Nāyar *Kārnavan* loves his sister's children more than his own. The explanation of this apparently unnatural feeling lies in two directions. First, the father is not necessarily of the same caste as the son. Secondly, there is always the possibility of a break in the union. Divorce is not a matter of any difficulty among the Nāyars, both the husband and wife having equal right to announce such a termination of their connection whenever either of the parties desires to do so. This instability of relationship is the principal reason

why a man's affection for his own son is neither so intense nor so permanent as his affection for his sister's son.

Also, in matrilineal communities family tradition descends only through the sister's progeny. As the Nāyars formed a fighting aristocracy before the British conquest, they had naturally acquired family tradition, mottoes and arms, which descend of right only in the female line. Hence also a man looks to the training of his sister's sons to keep up his family tradition. All these contribute to an extraordinary, and at first sight inexplicable, tenderness towards the children of one's sister.

*Relationship.*¹—Among the Nāyars the classificatory system of relationship is prevalent. When the ties of the family extend not only to one's immediate relations but to all who trace descent from the same ancestress in the female line, it is but natural that the terms of close relationship are used to all who belong to the family. As a matter of fact, the distinction between own brothers and collateral brothers does not exist. All the persons of your own generation older than you are called brothers, and equal respect is shown to them. They are called by such terms as big brother, small brother, etc., *only when they are older than you*. Those who are younger are always called by their names.

All women of your mother's generation are called mothers; those older than your mother are called *Peramma* or *Valiamma*, which means nominal mother or bigger mother, and those younger are called *Kochamma*, little mothers. But unlike among brothers, the distinction between one's mother and other females of the same generation is always maintained. Though respect is paid to all of them alike, own mother is always spoken of as mother, without qualification, and she alone has complete right to command you. Mother's own sisters are also different from those who are only collateral cousins to her. Mother's own brother and all of his generation are called *Ammava* (literally mother's brother). Here also the distinction between own *Ammavas* and collateral *ammavas* was very slight in Nāyar society till nearly thirty years ago. Now, however, one looks more on one's own *Ammava* as different from others, which is obviously due to the influence of the authority of direct relationship inculcated through the new system of education.²

The mother-in-law has no special name. This is, of course, due to the universal prevalence of first cross-cousin marriage. The mother-in-law is generally addressed

¹ Spencer and Gillen (*Native Tribes of Central Australia*, p. 56) try to prove that the classificatory terminology to express relationship shows the existence in some earlier time of group marriages. Perhaps it does so when such relationship terms are in use in a patrilineal community. On the other hand, in a matrilineal community such terms have nothing to do with the system of marriage, but only with relationship counted on the mother's side.

² Note specially: though all the women of the mother's generation stand in equal relationship, it is only the actual parent that is entitled to be called mother without any qualification to it. All the others are spoken of in comparative terms, as big mother, i.e., elder mother, small mother, i.e., younger mother.

as *Ammavi Amma*, the first word being the same as the wife of the mother's brother, and the second an honorific addition to it. Dr. Rivers, in *Kinship and Social Organisation*, as well as in *Melanesian Society*, has conclusively shown that wherever first-cousin marriage prevails, there the mother-in-law has no special name. His explanation that this is due to the obvious fact that, in most cases, the mother's brother's wife is the same person as the mother-in-law, and that the former position was antecedent to the latter, is fully borne out by the terminology among the Nāyars.

Another relation of importance in the Nāyar family life is the father's sister. She has a special name and has a very special function to perform. In Middle Travancore she is called *Appachi*. Her importance varies according to the status of the father's family. If the father's family is one of greater importance than one's own, then the father's sister is a person to be consulted on various matters with regard to the child. In any case she should be the first to visit the new-born child. This is called "*Kannom Kalcha*." In the marriage ceremony also she has a prominent place.

Enangar.—The whole of Nāyar family life used to be based, though this has decayed of late, on the close relationship with one or more other families, spoken of as *Enangar* or Allies. A *Tharavad* with its *Enangars* formed a social group rarely marrying outside its fold and generally arranging all festivities and ceremonies between themselves. Neither funeral rites, nor marriage ceremony, nor even any one of the hundred other minor things which go to make up the ordinary life of a Nāyar family, can take place without the co-operation, or at least the presence, of a member from the *Enangar* or allied families. The *Enangar* families are always of the same sub-caste, with a right to eat with you and enter any part of your house.

The *Enangar* system is evidently a kinship organisation, forming an inter-marrying class. The question of its origin is a very difficult one. The prevalent opinion is that it originated in the days when Nāyars fought and farmed in alternate months, when a kinship organisation of some sort was very necessary for safety and success. This organisation has become very lax of late, though it cannot in any way be said to be dying out.

Marriage Restrictions.—The marriage restrictions prevalent among the Nāyars have nothing much peculiar from the rest of the Hindu society. The bride must always be younger than the man, and must in strict orthodoxy belong to the same generation as his. He may not marry his mother's sister's daughter, who is to him as his own sister. All his sisters, own and collateral, together with ladies of a previous generation in his family, form a legal incestuous group. A man has, therefore, to marry either entirely out of the circle of his relations, or from among his *cross-cousins*.

Cross-cousin marriage¹ is the orthodox custom. Your maternal uncle's

¹ By cross-cousins I mean children of brother and sister. The relationship is expressed by the word *Machuna*, which is, it should be noticed, the same as in the Toda language. Among

daughter never calls you by any name which, in the Hindu code of manners, is done only with regard to the husband. She is your *a priori* wife, if such an expression could be used. She is spoken of as the *Mura Pennu* (*Mura* = customary, and *Pennu* = female or wife, meaning customary wife).

Unlike other Hindus a Nāyar may marry a girl from a lower sub-caste as long as she also is a Nāyar. He cannot marry a woman whose caste is higher than his own without the wife losing her caste. A Nāyar lady can choose her husband either from among the allied families or others, provided they are of the same or superior sub-caste. Also, she can marry from anyone of the higher castes, *i.e.*, either from the Brahmins or from the Kshatriyas. The alliance between the Malabar Brahmins and the Nāyars is a social fact of very great interest. In no other part of India is a Brahmin allowed to marry out of his own caste. In Malabar, on the other hand, among the Nambudiris or the Aryan immigrants, only the eldest member of the family can marry among the Brahmins, the others being forced to marry among the Nāyars. The permanence through ages of matrilineal descent among the Nāyars is due to this fact. The Brahmins, being of a superior caste, and the Nāyar wife of the Brahmin being unable to live in her husband's family, the system tended to be matrilineal as well as matrilocal. Also, since the children of such a marriage are Nāyars and not Brahmins, though the father is a Brahmin, the system remained wholly unilateral without any definite bilateral development. It is only the very highest among the Nāyars that have connection with the Brahmins. Through their influence the custom preserved all its strength in the lower classes as well.

The peculiar custom of the Malabar Brahmins of not allowing their junior members to marry among their own caste introduces a complication into the Nāyar system. The idea underlying such a prohibition is evidently the preservation of the big estates which the Nampudiris own. Since the Nāyar sons of the Malabar Brahmins do not inherit anything from their fathers, their estates remain undivided and descend only to the eldest son. Primogeniture has been the custom in every country where the preservation of big landed property in the hands of a few was aimed at. The undivided family among the Nāyars is also meant to conserve their possession of the land and maintain the political influence resulting from it. A point of utmost importance which should always be kept in mind in this connection is the interaction of economic and social forces. The interest of the Nampudiris to keep their property undivided led to their custom of primogeniture, and this again induced them to use their temporal power and sacerdotal influence to perpetuate the matrilineal system among the Nāyars. Also, the desire to preserve the family estates as a whole, kept the Nāyar families from being divided, making thereby a change to patrilineal system altogether impossible.

the Todas also *Machuna* (or cross-cousin) marriage is the orthodox custom. See p. 512, Rivers, *The Todas*. Also Appendix, "Similarities between the Nāyars and the Todas."

It is a point very keenly debated as to how far polyandry was prevalent among the Nāyars in olden days. During the last fifty years no trace of such a system has been found. It is to a certain extent true that there is extreme instability of marriage relationship among the commoner folk even now. But for a woman to have more than one husband at a time *seems to have been against the moral ideas of the community even two hundred years ago.*¹ Nāyar ballads and poetry of that age contain many passages where polyandry is spoken of as a barbarous and unknown custom.

But though strict polyandry does not seem to have existed at any time, traces of a *system of supplementary spouses*, very much like the Pirauru custom among the Australians, exist even now. In the *Enangar* or allied families, which we have noticed before, any woman of the same generation and in the same relationship as cross-cousin is eligible for marriage, and even if she is married, the young man whose spouse she might have been has certain rights—not distinctly conjugal, but still pertaining to it. He is the one who avenges her against insults. Her children call him "little father," and he has the right of entering any part of her apartments. Among the commoner folk a system of conjugal relationship may still exist. It is practically certain that this is a survival of the system of *supplementary spouses* such as we have in Australia and other places.

In this connection it may be interesting to notice the general position of women in Nāyar society. On *a priori* grounds we are inclined to assume that the position of women in matrilineal communities is higher than in patrilineal societies of the same standard of culture. How strongly this opinion is held will be seen from the fact that even in other parts of South India Malabar is spoken of as the "Land where women rule." It is impossible to make a general statement as to the relative status of women in matrilineal and patrilineal communities. But as far as the Nāyars are concerned, their women enjoy equality with men. They can hold property in their own right and enter the professions they choose. Traditions of scholarship and art are, perhaps, stronger among them than among men. Some of the best Malayalam poets and scholars have been Nāyar women, and at the present day the statistics of female education show a higher percentage of English-educated girls among them than among any other Indian community. All the girls' schools in Travancore are manned by them, and some of them hold such high administrative posts as inspectorships of girls' schools.

Polygamy was indeed prevalent, and is still legally permitted among the Nāyars. But this, in my opinion, does not show an inferiority of status. Though the opinion of Nāyar women would strongly be against the wife of the Akikuyu chieftain who told Mrs. Routledge that she would like her husband to have as many wives as possible,² there is no reason to believe that the possession of more than one wife

¹ See Note 3 at the end. Appendix on "McLennan and the Nair Type of Polyandry."

² Among a Prehistoric People (Akikuyu).

jars on the moral sense of either the man or the woman. The idea that monogamy necessarily means a higher stage of culture is indeed one of those *a priori* deductions which, though incapable of proof, are still held with dogmatic reverence. Even the curious and very interesting fact that among the Mormons (whose great fault was polygamy, according to those moralists who include monogamy among the Categorical Imperatives), it was the women who fought most strenuously for the maintenance of this custom, which they considered to be their most cherished privilege. It is an indubitable fact that where polygamy exists it is the women who are its chief advocates. The men, on the other hand, consider it a great bother. I have heard many rich men to whom proposals were made for a third or fourth marriage say "sufficient unto me are the evils of one wife."¹

On the whole I am inclined to say that women in Malabar among the Nāyars at least enjoy, relatively to women elsewhere in India, greater liberty, with regard to individual conduct, family relationship and social life. This no doubt is due to the influence of matrilineal customs.

IV.—THE MARRIAGE CUSTOMS AMONG THE NĀYARS.

The marriage ceremonies of the Nāyars have always been peculiar. Anthropologists who have studied the Nāyars have, on the whole, failed to understand the significance of these customs. In this connection I propose to speak only of three chief points. First, *The Talikettu Kalyanam* (or the matrimonial ceremony of tying the Tali); secondly, the *Sambandham* (or marital relationship); and thirdly, *Polyandry*.

The *Talikettu Kalyanam*² is generally performed on a batch of girls of the same matrilineal family. The age of the eldest girl is generally eleven and rarely thirteen. The idea is that this ceremony should take place before the girl attains puberty.³ But it is not only the children of the same family that can have a *Talikettu* with the others. The daughter of a male member of the family who belongs to an *enangar* clan or who is too poor to be able to afford the costly ceremony of *Talikettu*, can, with the permission of the *village community*, be placed in a separate seat and her *Tali* also may be tied at the same time.

When the ceremony could be performed, even when a girl is only six months old, it happens that in a *Talikettu Kalyanam* all the girls below eleven are disposed of at the same time. Therefore it takes at least another twelve years for a new batch

¹ See Lecky, *Democracy and Liberty*, chapter on Mormonism.

² The *Tali* is a piece of metal, generally silver or gold, which stands for marriage in all the communities who acknowledge Hinduism.

³ Among the Nāyars social puberty differs considerably in point of time from physiological puberty. It is a matter of great importance that the former should precede the latter. Any family in which a girl attains her physiological puberty, as evidenced by her first menses, before she had attained her social puberty, is socially outside the pale.

to grow up. There is one important custom (and Mr. Ananta Krishna Aiyer forgets to notice it)¹ which forbids two generations of girls being married together. When girls become mothers at sixteen, generations mingle frequently and often there may be girls younger than oneself who are one's mother's sisters and, therefore, stand logically in the same position as one's mother. The custom is that they should not undergo the ceremony together, though this is strictly kept up only in richer families.

The first step to this ceremony is a village and *enangar* council. The prominent people of the village and the *enangars* are invited and the *Kārnavan* takes counsel with them as to the various arrangements with regard to the ceremony. After the *Kaniyan*, or the medicine man (who is also the astrologer and magician), has fixed the auspicious hour for the ceremony, a *pandal*, or a decorated tent, is put up in the presence of the village elders, in the *Muttam*. In the middle of the tent so erected is kept the *Astamangalyam* (Sanskrit word *Asta*=8, *mangalyam*=happiness giving). The *Astamangalyam* consists of a measure of paddy, some rice, an absolutely white cloth (to show purity), an arrow (to show the warlike character), lighted lamp (uninterrupted prosperity), a looking-glass, and a *cheppu* (which is the Malabar equivalent of a powder puff), and a blossom of the coco-nut palm.

The ceremony of *Talikettu* can take place any time of the day, only it must be an auspicious hour. Evening is preferred because more gaiety is possible. Early in the morning the girls are taken to the family tanks by the women of the *Enangar* house, and have an oil bath. After this they are elaborately dressed. They put on various ornaments used only for that day. All the families, of course, do not possess these ornaments; generally, only one or two families in the village have them, but they are available for all on such occasions.

The tier of the *Tali*, who is generally a priest, or sometimes a Kshatriya lord, is invited, and he stops at a house near by. The day before the ceremony he goes, accompanied by the village elders on an elephant, in a procession to the nearest temple and gets the *Tali* consecrated by the priest of the temple. In these days I have seen the *Tali*-tier taken in a motor car to the temple, though the slow-moving elephant is more impressive.

At the auspicious hour the bridegroom, in a warrior's dress (with sword, etc.), arrives at the house, accompanied by a party of the villagers. He is welcomed by the male members of the family, and taken to a seat of honour. There the brother (own or collateral) of the girls washes his feet (this is a custom of extreme politeness prevalent among the Hindus). Then the brides are brought into the *pandal*. They make a *pradikshana* (go round the *pandal* by their left three or seven times). The eldest girl's father's sister's son (i.e., her marriageable cousin) gives some brand-new pieces of fine silk cloth, and then the priest or the warrior ties the *Tali* round the girls' necks. This is followed by a huge feast which goes on for four days. On

¹ *Cochin Tribes and Castes*, vol. ii, chapter on the Nāyars.

the fourth day this mock marriage is dissolved by cutting to pieces the cloth which was given to them the first day.

The *Kalyanam* days are the gayest in the family, and when it is over women keep on saying, "Ah, it takes another twelve years for this to come."

What is the significance of this custom? It must be said to start with that it has no significance in these days. At least, for the last seventy-five years it has been merely a meaningless ceremony, a survival of a peculiar system of marriage. The tendency in these days has been to abolish it, though the movement to do so has not gained much influence, except in the higher families.

The significance of this custom in ancient days seems to have been this. It is necessary to say that a system of sexual relationship, the laxity of which made it in many cases indistinguishable from promiscuity, seems to have been prevalent among the Nāyars, even as late as the eighteenth century. The literature of the time abounds in allusions as to how fickle ladies jilted their husbands and married others. A child was supposed to be legitimate as long as a man was willing to meet the expenses of child delivery, and that phrase still survives as a form of reproach against a father who does not treat his son well. A chorus of foreign, as well as Indian evidence, however, proves that sexual relations in the higher families were of a more or less permanent character, and were generally monogamous.

The *Talikettu* ceremony was, under these conditions, the actual and religious marriage. After that custom the girl was allowed to choose her own suitor, and when such a suitor, who was her husband, dies, she does not mourn his death, or become a widow, while, when the man who actually tied the *Tali* dies she undergoes certain formalities of mourning. Also the man who tied the *Tali*, though he never sees the girl again, is called "little father" by all the members of the family. All these go to prove that the actual marriage ceremony was the *Talikettu*. It must be remembered that *Tali* (an ornament round the neck) is a symbol of marriage for all Hindus, and among Brahmins all over India the *Tali* round the neck is only broken when the husband dies. If this, then, was the real marriage, what was the actual position occupied by the priest or warrior who tied the *Tali*? The fact that he is conducted to the house after the ceremony seems to point to at least a latent conjugal right. It is quite conceivable that in the days of child marriage this ceremony implied perhaps more than a theoretical right, though, during at least the last hundred years, nothing more than the form has been observed. In this connection it is well to remember a like ceremony performed with great festivities among the *Devadasis* or the "Temple-girls" in other parts of India. They also have a form of marriage which lasts for four days. On each day the girl puts on the dress of the women of different communities, and sits in a big hall, where are gathered together all the women of her local community. This ceremony, it seems, must precede before the girl devotes her life to "temple service." Since the Nāyar women, in olden days, do not seem to have had any settled form of marriage, and were free to

cast off one husband and choose another, the religious rites of marriage had to be performed without any definite marital relationship with any particular man. This seems to be the explanation of *Talikettu Kalyanam*.

The real marriage *de jure* and *de facto* is the *Sambandham*. "*Sambandham*" is a Sanskrit word, meaning good and close union. A Nāyar girl can have *Sambandham* not only with a Nāyar man, but with Brahmins and Kshatriyas. As a matter of fact the whole system of Nāyar customs seems to have been regulated to suit the purpose of the Nampudiri Brahmins. It must be remembered that a very strict system of primogeniture is prevalent among the Nampudiris, and only the eldest male member in a Nampudiri family marries from among his own caste. Only in case the eldest has no issue, or is incapable of having any, is it that one of his brothers gets the chance to marry in his own community. Generally, therefore, the younger sons of a Nampudiri family marry among the Nāyars. It must also be remembered that it is considered an honour reserved only for the highest Nāyar families to be allied to Nampudiri families by marriage.

The *Sambandham* customs are of the simplest nature. If the suitor is a Brahmin he goes and tells the *Kārnavan* of his desire to marry the girl. The *Kārnavan* then consults the astrologer for an auspicious date, and informs the village elders. The Brahmin brings some *Pudakas* (i.e., clothes which the wife wears) and hands them over to the girl in the presence of her relations and the neighbours, and it is duly announced that they are married.

If the suitor is a Nāyar he is generally the girl's father's sister's son. As we have said before, this is considered to be the most proper marriage. In this case it must be remembered the head of the suitor's family approaches the girl's uncle with a proposal that such marriage is eminently desirable, and the *Kārnavan* informs all the necessary people, and the *Pudaka* is given without much ceremony. It is when a stranger wants to marry in the family that all the formalities have to be gone through. Then all the village and all people in any way related are informed and, in the case of rich families, invited to a feast on the auspicious day. After an elaborate and sumptuous meal the village headman and family elders assemble in a hall. A lighted lamp is placed in the middle, and before it a plantain leaf with rice, betel-nut, lemons and spices. The bridegroom is ushered in here nearly half an hour before the ceremony, and he comes accompanied by some members of his family and the chief men of his village. There is a sort of social reunion for some time, and when the auspicious moment arrives, the bride, accompanied either by her mother (or, in some parts, by her mother's brother's wife) enters and approaches the bridegroom. In ordinary cases the bridegroom stands up and takes the clothes which some of his party had brought for him and gives them to the bride. In some cases the uncle of the bridegroom gives them to the mother of the girl.

The ceremony is now supposed to be over. The bride retires with her mother, and for some time a general conversazione, including sometimes recitals of odes,

vocal music, etc., goes on. One by one the guests soon depart, and the bridegroom stays in his wife's house for a few days. It must be remembered that the Nāyars are a strictly matrilocal community, though the custom shows a laxity in these days.

The *Sambandham* customs are not the same all over Malabar. They vary considerably in details, but the principle is the same all over. *Sambandham* in itself, though recognised as legal, has not the binding effect of a proper marriage. It is in theory dissoluble at will, and often it happens that, due either to misunderstanding or quarrel, either of the parties breaks off relations. In such a case, the marriage is deemed to have ended, and the aggrieved party can, without further formality, marry anybody else. The legal position is slightly altered in Travancore. By the Nāyar Regulation Act of 1912 it was enacted that if a man wants to break off his marriage relations with a woman to whom he was united by a properly conducted *Sambandham* he has to give her six months' notice and provide for the maintenance of her children by him (till they attain their twelfth year, unless the mother marries in the meantime). But this law has very little influence, and marriages and divorces go on in the same free fashion as before. In British Malabar, there is the Malabar Marriage Act of Sir C. Sankaran Nayar, the present Educational Member of the Imperial Government, by which a Nāyar entering into a *Sambandham* with a Nāyar woman can, if the parties choose to do so, register their union as a marriage to which ordinary marriage laws apply. This has been found very ineffective, for in the last twenty years during which it has been in force only six marriages have been registered, and all of them have been in the family of its distinguished author.

Before such laws came to be enacted (and to a very great extent even now) there has been singular freedom of marriage and divorce among the Nāyars. The men that a girl could possibly marry were strictly restricted by certain conditions. A Nāyar girl is not allowed to contract a marriage with men of a lower subcaste. She can marry either in her own subcaste or in castes above hers. She is not allowed to marry one who is not at least two years older than herself. She cannot marry anyone who shares pollution with her (that is descended from the same ancestress on the maternal side, however remote). There are cases when the common ancestress lived nearly four hundred years ago, but still her descendants are supposed to be so closely related in blood as to preclude matrimonial relationship of any sort.

The husband visits the wife's house after dinner, and this does not cause any particular inconvenience, as, till lately, marriage was restricted to people of one's own village or of its immediate neighbourhood. But in these days the tendency is strongly patrilocal, though ancient and aristocratic families still refuse to send their ladies out of the house. To keep within one's own house is considered to be a specially aristocratic privilege.

The question of polyandry among the Nāyars is a much debated point. This can be said with certainty: there has been no authenticated case of it at least for

the last fifty years. All the evidence that we have of this custom among the Nāyars in the sixteenth, seventeenth, and eighteenth centuries, are from foreign travellers who, it must be remembered, were not allowed to come within sixty yards of a Nāyar house. Their evidence, therefore, is an extremely unsatisfactory ground for dogmatising on Nāyar customs. On the other hand, the extensive Malayalam literature of that period contains no single allusion to polyandry. The works of Kunchan Nambiar, whom it is no exaggeration whatever to compare to Molière, though he describes minutely the social life of the Nāyars of the early eighteenth century with its laxity of morals, redeemed only by chivalry of conduct, makes no mention whatever of polyandry. On the other hand, in a famous passage he makes the declaration: "It is against the laws of all castes for a woman to have four or five husbands."

Nalanchu barthavoru thikku thanatu
Nalu jatikkum Viddhichatalorkanam.

How far this statement is decisive it is difficult to say. But one thing seems to be clear from it, that the idea in itself was repugnant to the community as a whole, though individuals might have practised it here and there.¹

V.—BIRTH AND FUNERAL CEREMONIES.

Among the Nāyars, as among all the people whose life is regulated by magico-religious customs, child-birth is an event of great and mysterious significance. Especially is this the case with regard to the first child. Therefore the ceremonies of nativity are of an intenser and more magical character during the time of the first pregnancy than during subsequent ones. Indeed, the mysterious nature of childbearing is entirely lost after the first time, and the ceremonies on subsequent occasions are only a few tabus, which are generally, in the phraseology of Van Genepp, "rites dynamistes directs et negatives."

The most important of the pre-natal ceremonies is *Pulicudi*,² or the drinking of the tamarind juice; and the customs relating it are as follows: On the appointed day all the *enangars* (people belonging to the same kingship organization) come to the house early in the morning, and the pregnant woman is taken out by one of them and bathed, after rubbing oil all over her. Then she is dressed for the occasion and, entering the house from the north, sits looking eastward. The astrologer, who being of a lower caste commonly stands in the outer courtyard, calculates the auspicious hour. He sends word when the time is come, and the *Ammāvi* (the wife of the mother's brother, and mother-in-law by right of the brother) pours a few drops of tamarind juice in a small silver bowl. The brother or the uncle of the

¹ See Note 3, Appendix.

² Dr. Rivers makes some obviously erroneous deductions based upon this word, for which see note on "The Similarities between Nāyars and the Todas," Appendix, Note 2.

pregnant woman, taking a sword, generally kept for this purpose, and holding it in the left hand points it to her mouth. The juice is then poured on it in such a way as to fall by drops into her open mouth. After this, one of the women of the *enangar* group smears the body and head of the pregnant woman with coco-nut oil and takes her to the tank. She is also required to choose one from a collection of different grains, and it is believed you can say from the choice what the sex of the child is going to be.

The significance of the ceremony seems to be twofold. First, it is the official notification to the allied families as well as to the local village groups of the fact that a woman is lawfully pregnant in the house. The intervention of the *Ammāvi* or the mother's brother's wife is supposed to show that everything is as it ought to be. It is, therefore, in the first place merely a social announcement. Secondly, the actual ceremony with the sword is supposed to have the effect of making the child a warrior, and it is believed to impart the virtues of bravery, manliness and honest dealing. It is, therefore, in the classification of Van Genepp, a rite direct, sympathetic, automatic and positive. The tamarind juice is believed to create sensitiveness and honour. It is a "contagionist" rite. Whenever a man shows cowardice, the question that is asked as a mark of contempt is: "Were you not born after *Pulicudi*?" or "did not your mother drink the tamarand juice?"

After the *Pulicudi* there are many prohibitions which a pregnant woman has to respect. Of this the most important is the absolute sexual tabu which dates from the *Pulicudi* to forty days after the childbirth. Other tabus are mainly connected with food and are mostly "contagionist" positively or negatively. Thus the woman is not supposed to take very warm food, as it might scorch the head of the child; she is not supposed to eat much hot food (chilis, pepper, etc.), because it might put out the eyes of the child. There are no definite rules about these, but every mother in her desire to do the child no possible harm keeps herself away from all doubtful matter.

After the birth of the child there is a mild pollution (as compared to the strong untouchable pollution caused by death) in the family. This pollution does not carry any disabilities except the prohibition to enter any sacred precincts. On the fifteenth day there is a purificatory ceremony, but there are no festivities or celebrations connected with it.

The mother and the child are accommodated in a special room which no man may enter. Unmarried girls, unless they are little children, are also not allowed to go near. The child, of course, can be seen by all after the cutting and burying of the umbilical cord. It is handed round to the father and other interested relations. No kind of food except the mother's milk is given to it, and, if the mother died at the birth of the child, it is generally given the milk of some relations or even of outsiders who have children of almost the same age. The person whose milk the child thus drinks, though she be an outsider, is considered equal to its own mother, and her children are considered the same as own brothers. There is a story of a Nāyar

king who as a child lost his mother and was therefore fed on the milk of an attendant woman, refusing to punish her son after repeated acts of treason on the ground that an ocean of milk flowed between them which a drop of blood would pollute for ever.

On the twenty-eighth day the child undergoes two ceremonies. The first is called *Erupathettu Kettuka*, or the "Tying of the twenty-eighth day." Before that day the child is not allowed to wear any ornaments. On the twenty-eighth day a silver or gold belt, or a mere cord with an ornament in the shape of a heart or a laurel leaf at the front, is tied to the waist of the child. The laurel leaf was most certainly meant as a charm in ancient days, while now it is nothing more than an ornament. The waist-belt occasionally has attached to it amulets made sacred by the repetition of *mantrams* or magical formulæ over it. Such amulets are worn for the purpose of preventing disease and keeping the child safe from the demons and other evil spirits.¹

After this comes the name-giving ceremony. The astrologer announces the star under which the child is born and presents the horoscope. Then he mentions the initial letters of the names. Each star has generally two or three letters, and the whole of Sanskrit and Malayalam can be drawn upon for the names of deities beginning with those letters. The choice is really very wide, even with the most difficult initial letters.

The child is not supposed to be carried out of its mother's family till the sixth month. Then, on an auspicious day it is taken to the father's house (if the father is a Nāyar) by the mother, with some tokens of respect to the father's sister. These presents generally are tobacco leaves (always a mark of respect among the Nāyars), betel, etc. The father's family generally gives a certain sum of money for the expenses of the coming ceremony.

These proceedings are preliminary to the ceremony of *Choru Koda*, or the giving of rice. For the first six months the child is given only the cooked flour of dried plantain fruits. Rice, which is the chief food of the Nāyars, is strictly prohibited before the *Choru Koda*. As a boy of fourteen or fifteen, I have many times officiated in this ceremony, on one occasion as a member of the father's family and on others as a member of the maternal *Tharavad*. What is done is that the child is taken to the temple by its mother, accompanied by some women of the *Enangu* group, together with a male representative from the father's house (if the father is a Nāyar) and one from the mother's own family. There is an offering to the god of the temple in the form of rice cooked with milk and sugar, and all the party, after purifying

¹ The question of origins is very difficult, yet we cannot pass without noticing the idea that the loin cords are the beginnings of dress. Professor Wilhelm Wundt, in his well-known book on *The Elements of Folk Psychology*, has shown conclusively that it has no reference to the development of clothing, but is entirely magical in its purpose (pp. 86-87). The prevalent custom among the Nāyars supports this view. The custom can be understood only in relation to the general beliefs about cord-magic and the efficacy of amulets attached to waistbands.

themselves by bathing in the temple tank, come to the *Darsana* (the aspect towards which the face of the image looks). There the priest brings the offering and the male member from either the father's family or the mother's own family takes a little of it on his pointing finger and gives it to the child. The child is supposed to inherit the qualities of the person who gives it the sacred rice, an idea allied to the superstition concerning godfather and godchild. There is, of course, a feast on the day at the child's house.

"Chaque société générale," says M. Van Gennep, "peut être considéré comme une sorte de maison devisée en chambres et en couloirs. . . . Chez les demi-civilisés ces compartiments sont soigneusement isolés les uns des autres et pour passer de l'un à l'autre des formalités et des cérémonies sont nécessaires." This idea that in semi-civilised societies stages of life are marked out with great precision so that the passage from one to another necessitates ceremonies or "rites de passage" is applicable only in a very limited sense in the case of the Nāyars. Among them such ceremonies are few and very far between. The male children, after the *Churu Koda*, or the rice-giving ceremony just now described, have only one other ceremony to perform which is called *Sasty-Party*, or the fullness of sixty years. Between his sixth month and his sixtieth year a male member of the Nāyar Society has no *rites de passage* to pass through. The *Sasty-Party*, which takes place on his sixtieth birthday, is a sort of jubilee, after which respectable people are supposed to retire from worldly life. It is indeed a *rite de passage*.

Women have naturally more ceremonies than men. Apart from the *Talikettu* (described in the last chapter) a Nāyar woman has to pass through the ceremonies of *Terundu Kuli* (bathing after the first menses) and *Pulicudi* described above. After she has become a mother a woman can be said to be free from all ceremonies till her sixtieth year, when, after a *Sasty-Party*, she also retires from active life.

The Nāyar funeral ceremonies are of a very complex nature. They show a great deal of Hindu ideas about soul and re-birth mixed with purely Nāyar beliefs about *Pretrams*, ghosts, etc., etc. It is important, in this connection, to notice at the very start that the Nāyars make a clear distinction between the ceremonies performed at the death of the eldest member of the family and those at the death of others. The following is the procedure generally adopted at the death of a Nāyar. As soon as a person dies he is bathed and clad in white, and laid on a bed made of long plantain leaves. If it is the eldest male or female member of the family that is dead, then all their relations on the matrilineal side present new cotton cloths, with which the corpse is covered and tied before it is taken to be burnt. Only the eldest members are burnt; others are buried. Apart from the greater importance attached to the death of the eldest members, the ordinary funeral rites are in essentials the same.

The presence of the *Mārān* (a particular caste among the Nāyars who perform the lesser priestly functions) is absolutely necessary on the occasion. He is sent for as

soon as death has taken place in a house, and on his arrival undertakes the general management of the ceremonies.

After the corpse is tied and laid on the plantain leaves, a ceremony called *Para Nirathuka* takes place. (*Para* is a measure of paddy, and *Nirathuka* means to place in line.) A coconut-oil lamp is lit and placed at the head of the corpse and immediately in front of it are placed three *paras* of rice. The significance of this ceremony is unknown to me.

Ceremonies of Cremation.—If the deceased is the eldest of a family the body is now cremated. A pyre is made of mango wood, and the corpse is placed with its head towards the south (the god of death, according to the Hindu mythology, resides in the south), and then covered with fuel. The nephew or younger brother lights the fire. Then all the members of the family and all others who have been polluted by contact with them go and bathe in the tank. During the process of burning there is a process called *Kumba pradikshanam*—which is manifestly an Aryan custom (*Kumbham* and *Pradikshanam* are two Sanskrit words: the first means a pot, and the second means to walk round). The ceremony, as its name implies, consists of walking round the pyre with a pitcher, the bottom of which is pierced. One of the family fills this pitcher with water and carries it three times round the burning corpse, dashing it on the ground at the end.

Two or three members of the family continue to perform funeral rites for the next fourteen days. As I have not taken part in it I do not possess first-hand knowledge.

For all the fourteen days, all the members of the family are under pollution. The pollution, in the case of death, is very strong. All the members of the family are untouchable, and any Nāyar who touches them must purify himself by a bath. On the fourteenth day is the purificatory ceremony. The *Mārān* comes in the morning and gives everyone some oil. After smearing the body with these everyone goes and bathes, and comes back clad in white. The *Mārān* then sprinkles holy water, and a Brahmin priest purifies the house. There is generally a big feast for two days.

The feast on the fifteenth day is accompanied by some sports. All the men of the neighbouring villages come for it, and there is great *tamasha*. How far this could be identified with funeral sports elsewhere it is hard to say.

After these feastings one of the family undertakes a *Diksha* (which means a vow) for forty-one¹ days or a whole year. During this time, the man who undertakes the *Diksha* lives apart with a Brahmin. He is not allowed to talk to or see a woman. He must not cut his hair or his nails. He must bathe twice a day in the river, or in the tank, and lead a pure and pious life. If it is only for forty-one days, there is not much feasting at the end of it. If it goes on for a full year, there is a huge celebration,

¹ All ordinary vows are taken for forty-one days. If you want to placate a deity you pray to him for forty-one days. If you want to make a big sacrifice it extends to forty-one days, etc.

with all kind of sports.¹ The family, which is supposed to have been in mourning during the whole period, goes back to its normal life.

M. Van Gennep considers the state of mourning as "Un état de marge pour les survivants, dans lequel ils entrent des rites de séparation, et d'où ils sortent par des rites de réintégration dans la société général (rites de levée du deuil)."² With regard to the first fourteen days in particular, a Nāyar family in mourning constitutes a special society. During this period, and to a certain extent to the period till the final rites (forty-one days, or one year) social life is suspended. The ceremony at the end of the year is then a *rite de réintégration*.

VI.—RELIGION AND MAGIC AMONG THE NĀYARS.

The religious beliefs of the Nāyars show an extraordinary mixture of Hindu and Dravidian cults. All the temples are dedicated to Krishna, Siva, or Kartyayani. There are also a few *kavus*, or groves, for the worship of the lesser Hindu deities. But the important point with regard to this is that the Nāyars are, as a whole, a people almost without a religion,³ and they use Hindu temples for practices which receive no sanction even in the generous vagueness of that creed. The religious conceptions of Hinduism have but the slightest influence on the Nāyar community as a whole. It is quite true that there are a good many devout Hindus among the Nāyars, but the very fact that the distinction of Saiva-ism, Sakti-ism, Vaishnava-ism, etc., have not reached them, is sufficient proof that, though they have been Hinduised in form and have belonged to the Hindu fold, their primitive beliefs have survived to a great extent.

Nothing shows so much the extreme persistence of primitive culture, even in the face of higher civilising agencies, than the wide and almost universal acceptance of spirit-worship, and the almost entire absence of religious life among the Nāyars after at least twenty centuries of contact with Hinduism. Their contact with religions has not been limited indeed to Hinduism. The Jews, flying after the destruction of their Temple, found refuge among the Nāyars, and have lived in their midst for nigh two thousand years. The Apostle St. Thomas is supposed to have planted a community of Syrian Christians among them, who also have lived side by side with the Nāyars as their social inferiors in Malabar for almost the same length of time. Ever since Mohamed founded his religion in Arabia, Allah has found faithful worshippers in Malabar who moved with equal status among the Nāyar population. The beautiful creed of Gautama Buddha had for long its devout votaries in the land of the Nāyars, and traces of Buddhist monasteries and survivals of Buddhist worship still

¹ There is a story about a poet who enjoyed this celebration very much and said to the master of the house, "I hope there will be one like this here every year."

² *Rites de Passage*, p. 211.

³ See the discussion following.

abound. The militant Romanism of the Holy Inquisition, and the no less militant Protestantism of the Dutch, had their chance, in turn, for at least a century and a half. Yet, with all the great religions of the world to choose between during the last two thousand years, it is nothing short of marvellous to see the Nāyars, who have, it must be remembered, assimilated a very great deal of the material and intellectual culture of their neighbours, and, more than that, excelled them in literature and music, still maintain with undiminished vigour their spirit-worship, black-magic, and demoniacal ceremonies, and are devoid of almost every element of true religious life.

We may be accused of the narrow use of a wide word in the phraseology of Tylor when we deny that the Nāyars have any religion apart from a veneer of Hindu influence. Their beliefs are mainly magical. Here, of course, I am treading on very dangerous ground, dangerous even to the initiated, but fatal to the novice. In this essay I have taken the distinction between religion and magic as being primarily a question of method rather than of intention or possible effect. The orthodox French opinion that the difference between magic and religion is that the latter is social while the former is anti-social, has been proved by Mr. E. S. Hartland and Dr. Marett to be wholly untenable; while the contention of Dr. Marett himself¹ is that the difference between magic and religion lies in the attitude of society towards them.²

Among the Nāyars there is an implicit distinction between practices to propitiate a god and those with which to bully a spirit. Bullying a spirit for purposes of social benefit I have not considered to be religion, though it is recognised by society as beneficial and therefore according to Dr. Marett should be considered as religious—because it does not possess the emotional and the psychological elements which

¹ *Anthropology*, p. 210 (Home Univ. Series).

² Dr. Marett has recently expressed his view thus:—

"The dominant social tradition tolerates in a community only certain practices and the beliefs associated with them. These may be said to constitute the religion of the community. It does not matter whether they embody customs such as sacrifice and prayer which are essential to the civilised man's notion of his religion, or whether they involve processes of sympathetic magic, etc., such as have for us become disreputable.

"On the other hand, when resort is had to the supernaturalistic means in order to gain selfish and anti-social ends we may speak of magic." (Class Lecture on Primitive Morals.)

Here Dr. Marett seems to go back to the French view and hold that the difference between magic and religion is that the former is selfish and anti-social while the latter is disinterested and social. The view here submitted is different. It is submitted that primitive society understands the difference between magical and religious customs even when both are essentially social and disinterested. To the primitive mind, the difference between religion and magic lies in the method and procedure of the ceremonies, or, as we shall now call them, the ritual. As method and procedure only reflect the mental state of the performer and the society to the benefit of which these ceremonies are performed, this difference is essentially psychological. This position is better explained by the Nāyar customs and beliefs noted below.

Dr. Marett himself has, with great truth, insisted on as the essence of religion.¹ I have called such practices magical, not only because they lack the emotional and the psychological elements of religion, but also because the fundamental presupposition in such performances is the power wielded by the magician, the "*orenda*" which he has acquired, over the ghosts.

This is very clear from the Nāyar ideas of *Thēvar* and *Pisāchu*. *Thēvar* can be propitiated but never conquered; while a *Pisāchu* (or ghost), though superior to man in power, intelligence and will-to-do-harm, can be rendered harmless and kept under control by magical practices. The former conception is clearly Hindu and relates only to Hindu gods. The spiritual ideas of the Nāyars themselves seem to be confined to ghosts, spirits, and to a comic elf called *Kutti-Chāttan*.

Before we proceed to consider them, the position of the magician in the Nāyar community has to be made clear. It is generally taken for granted by anthropological writers that wherever social life is regulated by magical practices the *Shaman* comes to be held in reverence. It is very interesting, therefore, to notice that the Nāyars never accepted the superiority of the magician, and never accorded him any privilege. The magico-medicine man is, on the other hand, considered to be a sort of servant-in-attendance on a nobleman's family, something like a family doctor. The explanation that it is due to the warlike character of the Nāyars is clearly inapplicable, as the magician attained kingly powers among the Masai, for example, whose society is also organised for purposes of war. The fact that the *Kāniyān* (or the magico-medicine-man) is not only not venerated, but actually considered an inferior, may be more due to the effect of caste-system, which places Nāyars high among the social scale.

The *Kāniyān* is, of course, recognised as a necessary person. He gets from all the houses of the village settled remuneration, mostly in coco-nuts. He is not otherwise paid for ordinary consultation, and he is bound to attend to every case in the village without fail. For special exertions of his magical powers he has special payments settled by village custom. He has power, both inherited and acquired, to cast-off spirits, to perform preventive magic, and keep general control over ghosts.

There are supposed to be three kinds of spirits, *Prētam*, *Bhutam*, and *Pisāchu*. A *Prētam* is the spirit of a dead man. The ghosts of men who died in the ordinary course of events are not really *Prētams*, because they do not wander about to overpower people and drink their blood. It is generally the ghosts of men who died as a result of foul play, or by accidents such as drowning, or by terrible diseases such as smallpox and cholera that wander about at nights. A *Bhutam* is seen generally in marshy districts and does not always hurt people unless they go very near him. A *Pisāchu* is a general spirit of the air causing such diseases as smallpox. All these

¹ Threshold of Religion: Essays on Pre-animistic Religion, the Birth of Humility, and Is Tabu negative magic?

spirits can be seen. At night their mouth is full of fire of different colours, but it throws out no rays. That it throws out no rays is important because therein is supposed to lie the distinction between an ordinary light and the fire in the mouth of a spirit.

The *Prētam* is supposed to hover round its burial place or the place of its accident. Everyone is warned off such a place at night time. The hours during which these *Prētams* appear are between 9 in the evening and 3 in the morning. It must be noticed here that the *Prētam* of a "black-magician," as distinct from a social magician like the *Kāniyān*, has more power to do mischief: it has more "*orenda*," so to say. The man who practises black magic invariably dies a violent death, and his *Prētam* hovers round the scene of his former activities.

"Man dreads above everything else," says S. Reinach,¹ "illness and death, punishments inflicted by the angry spirits with which his imagination peoples this world." This is absolutely true with regard to the Nāyars. Disease is generally believed either to be the outcome of offending a god or due to the magic performance of interested relations. Preventive sacrifice is very common, and every year all respectable Nāyar families perform some sort of propitiation ceremonies in the village temple. If a whole village is ravaged by some epidemic, the villagers inquire into the matter through the astrologer, and if he finds, as he usually does, that it is due to the wrath of the village god or goddess, ceremonies of various kinds are at once undertaken and goats are offered as sacrifice, and sometimes a *Desavalathu*, a procession of the people with images, around the village is performed.

But such occurrences are rare. Only epidemics are put down to the wrath of offended gods. Other diseases as well as misfortunes are put down to the influence of *Prētams*, bribed into action by jealous or covetous relatives. When any great misfortune, such as a succession of deaths, happens in a family, the first thing that is done is to consult the astrologer, who is sure that a ghost is working it under the influence of magic. His prescription is, of course, counter-magic, to be performed by himself. An offence to a god can easily be rectified if one does some elementary sacrifices, but the performance of counter-magic is neither so inexpensive nor so easy. First of all one has to get rid of the evil already done. For that elaborate ceremonies may be necessary. Secondly, ceremonies to keep one immune from future attacks are essential. If it is any woman who is possessed of the devil, and it is women who generally suffer from these things, an expensive and elaborate devil dance called *Kolam Thullal* has to be performed. For this the village has to be informed, and each family in the village is supposed to contribute something in kind to the expenses and take its share in the work. The ceremony is as follows:—

Preparations for the dance must begin a good many days beforehand. The *Kāniyān* of the village with twelve others of his people come to the house where the

¹ *Cults*, p. 37.

ceremony is to be performed and each of them puts on a mask made for the occasion and paints himself in such a way as to look really terrible. The mask of each has a different expression. At about 8 o'clock in the night, the girl (or girls) possessed of the devil is brought in front of the house where are gathered all the people of the village. The whole place is illuminated with big lamps and the girl sits alone, sometimes supported by her mother. Then one by one the masked magicians come before her and execute most frightening dances to the accompaniment of terrifying music. In dancing they make various gestures, possibly with a view to mesmeric effect, and throw various sorts of power, and *rudhilam*, prepared to look very much like blood, is brought into great prominence. Dancer succeeds dancer, each more terrible looking than his predecessor, and the poor girl loses control of herself and falls into a sort of hysteria, in which the devil in her confesses where it came from and who prompted it,¹ etc. In that case the dance is supposed to have been successful and the devil is supposed to have been cast out.

This *Kolam Thullal* is performed on various occasions. The only time I have witnessed it was in 1913, when passing through a village situated in the very heart of the country. The "subject," on that occasion, was a child-mother of fourteen, and the reason for the performance given by her brother, when asked by me, was that the girl had fainted four or five times during the month "without any cause," and that they had found out through the astrologer that her husband's relations had been trying to cause trouble by evil magic.

A milder and less expensive form of the same dance is *Velan Thullal*. In this only one man dances with almost the same paraphernalia as the *Kāniyāns* have for *Kolam Thullal*. This variety, however, is generally used only to cure children.

Such performances are only for the ghosts of dead men who have entered into girls or children. But if *Kutti Chattan* tries to do harm, these practices are of no avail. *Kutti Chattan* (sometimes merely *Chattan*, *Kutti* means boy, a term of endearment, *Chattan* is supposed to be a corrupted form of Satan) is in no sense a god. He is something like Puck, very much inclined to mischief. He is supposed to be a dwarf, though he can assume any other form or remain invisible as he chooses. He never goes out of his way to harm anyone, though if anybody injures him once, *Kutti Chattan* never forgives and keeps on troubling him for life. His favourite method of annoying anybody is by throwing stones at the house or dropping unclean things in the food. He may do so without interruption, which would render life almost impossible. He is supposed to have no fingers and, therefore, his vices can be thwarted by people who know it. For example, he cannot pick up things if kept in a place

¹ Note, the "confessions" are without doubt due to subconscious suggestion. The whole scheme of the dance—the music, the masks, the lighting—seems to be arranged with the sole purpose of rendering the "subject" liable to suggestion. More than this, the girl herself believes that she must be possessed of some ghost, and therefore the ground for suggestion is already prepared.

high above his reach unless, of course, there is something near by on which he could climb. He cannot untie a knot, as he does not possess fingers, though he can open the strongest lock. What rich people do to keep their money out of his reach is to tie a knot on the purse and keep it locked in a safe, the latter precaution being necessary against human hands that possess fingers.

Kutti Chattan can, of course, be tamed by magicians and bribed to do whatever his patrons like. There is a story that a Brahmin landlord who was also a magician tamed a *Kutti Chattan* and used him for the purpose of keeping a watch on his things. A Christian tenant of his who had gone to pay the rent, not knowing the existence of the invisible and mysterious detective, stole certain things and took them home with him. But lo! *Kutti Chattan* had followed him, and the man was found dead next morning, and the stolen things were in their place. Such is the power of *Kutti Chattan*, the household elf of Malabar.

Whether the practices here narrated and the belief in the existence of a "naughty elf" amount to religion depends very much upon the definition we give to it. Though they are distinctly social and possess social sanction, I do not think it can be called religion, because there is a fundamental difference in the emotional and psychic aspects of religious experience and practice, and such social beliefs and customs as I have described here.

But side by side with this there also exists "black magic," sinister, selfish, and anti-social. It is fast disappearing, more as a result of economic pressure than because of any growing disbelief in it. A young man has no time now to devote himself entirely to sacrificing goats and birds all night and chanting formulæ so that he might become possessed of magical power. Those young men who have devoted themselves to such practices are, however, looked upon with great fear. The community does not like such practices, and though these magicians may excite fear, they are also aware of the general belief that they will some day come to a disastrous end.

Their practices are carried on in secret and nobody knows what they do except those initiated. Their assistance is procured only by people who want to do harm to others or satisfy ignoble desires. A man often gets the help of a magician of this sort to perform his "art" so that an enemy of his who is gone on a pilgrimage may not return. They are avoided by all decent people, and society in general, though it fears their "art," considers them charlatans.

There are many minor superstitions that can be only briefly noticed here.

The Evil Eye.—The magical effect of the evil eye is a matter of very serious concern among Nāyar women. I remember being taken to task for telling a woman how healthy her boy looked, and must add that I felt as if I had been convicted of a heinous crime when four or five days later I was told that the child was ill. The entire feminine opinion of the village was convinced that the child was suffering from my evil eye, and a good many *mantrams*, or magical formulæ, were said over it before

the child was well again. With this idea of evil eye is bound up what is known as *Kari-Nakku*, or black-tongue. When a man with *Kari-Nakku* utters anything it has effect at once. When the evil eye and *Kari-Nakku* are combined, then it has "much *orenda*" as an Angotkin would say. If your newly built house is looked upon with an evil eye and some good expression used by such a man about it, a lightning might set fire to it and destroy it the same night. If your mango tree is full of fruit this year and a man with an evil eye and *Kari-Nakku* looks at it and says "how fortunate," it might happen that for years to come it would bear no more fruit. If an envious woman, aroused by the green-eyed monster of jealousy, remarks how pretty a girl is, her hair might begin to fall off, her colour might fade, her cheeks might lose their bloom.

The fact to notice with regard to this is that you have to say complimentary things to effect evil. If you said how ugly a pretty girl is it would not affect her. You must say, out of your heart, how beautiful she is and then it might have effect. Everything is supposed to depend on whether it is said with or without design. If anything is said with design there would be no effect. Only when such exclamation comes out of the heart has it the power to do evil.

Koti.—Another evil-working power is *Koti*. The word literally means desire, but as an evil force it works only when a hungry person sees a rich and healthy fellow eating a good meal. If a poor man sees you eat, and his mouth waters at the delicacies before you, you are sure to suffer from his *Koti*, you will get stomach-ache and even dysentery. It is the particular look of the hungry man that has the evil effect. When once a man begins to suffer from another's *Koti* the only way to get over it is to eat some salt over which some *mantrams*, or magical formulæ, have been repeated.

The tabus which are prevalent among the Nāyars are too many to be described in detail here. A few examples will show how, even in the most important matters, life is regulated in primitive society. The reason for such prohibitions, as M. Reinach points out, is to live at peace with the spirits that are supposed to surround you.

You are prohibited from eating your food at dusk. It is supposed to be an awful sin, because everything is considered to be in "a state of suspended animation" in the very short period which marks the transition from a hot tropical day to a cool and breezy night. You cannot do anything at that time except bathe or pray. There are tabus on what you may do on particular days of the week :

" *Ezāzcha Kulichalum*
Vyāzāzcha Kulikkarutu."

This is a typical example of the Nāyar tabu. Its meaning is this : "Even if you have an oilbath on the seven days of the week, don't do it on a Thursday." Though there is no reason assigned for such a prohibition, there is a sufficiency of

rhyme, and I must say that I never knew anyone who took an oil bath on a Thursday, except people who take it every day.

The tabus extend to the way in which you sleep. You are not supposed to sleep with your body north to south or west to east. The reason, I believe, is that the spirits of the dead are supposed to live in the south and in the east, and if you lie with your head facing them you might become possessed of them.

There are certain days of the lunar month on which no one may start on a journey :

Yama Rudrāhi Muppāram
Trkella iṇa ēzhu Naal
Vitakkil vilāyā Bhāmi
Pōkunnakil avan varō.

On the seven days presided over by the seven stars thus enumerated, if a land is sowed no seed will sprout, if anyone starts on a journey he will not return.

I remember a curious story connected with this. Some four months before leaving for England I had to see the Inspector of Schools in Travancore to get my Leaving Certificate. The only day available for me was one of these tabu days, and in spite of the protests of everybody else in the house, I set out on my business. When I reached the capital of the state the Inspector of Schools had left on circuit an hour before to the place where I started from. I followed him there, but when I arrived he had left the place, and, as a result of continuous journeying and bad food, I was laid up in bed through a physical breakdown. It was true that if I had not started on that tabu day, but had had the patience to wait for another twenty-four hours the Inspector of Schools would have come to the town where I was living ; it was also true that I came back very ill. Everyone, therefore, took it for granted that all this ill-luck was due to my starting on a bad day. Many are the stories that are told of people suffering great misfortunes due to starting on these bad days, and there is, as M. Reinach would say, "a vast oral tradition of leading cases" connected with it. I daresay my case will go down as a most authentic one, as the facts are undoubtedly true ; only the explanation is doubtful.

Tabus like this can be mentioned without end ; but it is useless to do so, as they all seem to have the same "rationale" : that is, you will break your peace with the world of demons and ghosts that surround you and bring down upon yourself their wrath if you break any one of these rules. Tabu among the Nāyars is essentially an arrangement to keep the ghosts and spirits pacified : for it is clear to them from the tested experience of past ages that to break any of these rules is to challenge those who have power to do them great harm.

In whatever is said here, it should be understood that I have tried to eliminate from the Nāyar beliefs those elements which are indubitably Hindu. As I have pointed out at the start, there are a good many devout Hindus among the Nāyars, but it is an interesting fact that the practices and beliefs above described are pre-

valent among them also. The more one looks into these matters the more one becomes clear that in the unorganised and uneducated human mind, be it "civilised" or be it primitive, there is a horizontal stratification of the most contradictory ideas, which lie absolutely undisturbed in the ordinary course of life. In the mind of the ordinary man whose *forte* is not clear thinking, a great deal of intermingling of such ideas might take place. It is no uncommon sight to see a thoroughly Hinduised Nāyar who talks about Absolutism and Illusion, and believes in them, paying a *Kāniyān* to get the devil out of his little niece. This is, perhaps, the truth which lies midway between those who assert, like Dr. Frazer, that magic and religion are hostile and cannot be reconciled, and those who, like Dr. Marett, hold that in their origin they are the same, that it is in their character as looked upon by society they differ. The view I have maintained here is that religion and magic are different in their psychological and emotional effects and that Dr. Frazer is right when he says that they are at bottom hostile. But the almost universal coexistence of magic and religion is due to the attitude of society which tolerates all contradictions and insists only on their effect being for social welfare.

VII.—THE MATERIAL CULTURE OF THE NĀYARS.

Occupation.—The Nāyars are at present an essentially agricultural population. The vast majority of them are peasant proprietors owning small farms. Rice and coco-nuts are the chief things cultivated, though in North Malabar pepper and cardoman have also their share.

With regard to these matters the Nāyars have attained a certain stage of excellence. Their coco-nut estates are planted with a considerable amount of scientific skill and they are proficient in the industries which are allied to coco-nut cultivation; such as coir-matting, copra making and extraction of coco-nut oil. The extreme fertility of the land has made agricultural chemistry, as far as coco-nut and rice cultivation are concerned, a matter of secondary importance; and even to-day there are very few Nāyars who have studied the Western methods of agriculture.

As each Nāyar family generally lives in a compound of its own, coco-nut cultivation is generally in small farms. Extensive coco-nut plantations owned by the same man are very few. The position is much like that in England before the Enclosures. Even if all the land in a particular area is owned by the same person it is seldom enclosed and transformed into one large estate. On the other hand, they continue to be regarded as separate compounds and the houses on them are generally occupied either by Nāyar tenants or by Pulaya slaves.

The fact that Nāyar families live in garden houses is one of great significance. Horticulture is practised with great interest in all families, rich as well as poor. It is, in fact, very seldom that any Nāyar family uses vegetables bought from the

market. All that is necessary is grown in the compound. The great difficulty of village life, effective sanitation, becomes an easy matter.

Rice cultivation is still based on serf-labour. The Pulayas were the slaves of Nāyars till nearly fifty years ago, when slavery was abolished. But the abolition of slavery has only changed the legal status of the Pulaya. He still remains a landless labourer effectively bound by his former chains, by the great social barrier of caste and the greater difficulty of poverty and ignorance. The Pulaya is an agricultural labourer and nothing else. As long as he remains attached to one family he receives certain sums of money in times of distress, pieces of cloth and food on auspicious occasions, extra payment at childbirth, etc. He loses all this for an insecure wage and a nominal freedom if he leaves his old master. The Pulayas, therefore, have mostly remained serfs in spite of the abolition of slavery.

In fertile districts the ordinary methods of cultivation are followed. In the less fertile parts the system of leaving the farms fallow in alternate years, or occasionally once in three years, is followed.

The harvest time is between April and May. Naturally the gayest part of the Nāyar year is in May and June. The great festivals of all the temples from one end of Malabar to another fall in this part of the year. The festival in a temple extends to ten days, but the last two days are the most important. Very seldom these festivals overlap, and therefore for two full months the Nāyars enjoy an almost uninterrupted carnival. In these places poets from the length and breadth of Malabar come to meet their confrères, artists to exhibit their work, musicians to display their art, astrologers to practise their tricks, in short anybody who has wares to exhibit or sell. No one below a Nāyar in the hierarchy of caste can go to these places. They are, of course, admitted and entertained free. In some places even the food is supplied by the temple. The greatest of all these festive occasions is the *Puram* at Trichur, in Cochin State, which falls at the end of April or the beginning of May. Then there is the *Astamay* at Vaikom a little earlier in the year.

The Nāyars, as we noticed at the beginning, are mainly an agricultural people; but a good many of them also go into trade. There are in these days Nāyars very high in Indian commercial circles.

The educated people generally choose the learned professions. In medicine, in law, in journalism, and in public life, they have been very successful. Especially in journalism it is interesting to note that a fair percentage of the editorial staff of the papers in India, whether European or Indian, is drawn from them. The only Indian member of the Viceroy's Cabinet is a Nāyar gentleman, Sir C. Sankaran Nāyar.

Distribution of Wealth, Poverty, etc.—The distribution of wealth among the Nāyars does not show the same great inequality as among other communities of India. There are moderately rich families having an average income of £10,000 a year, but extreme poverty is unknown. This is mostly due to two reasons:

First of all, there is the joint family system which provides for all the members without distinction. Secondly, every Nāyar family lives on its own plot of ground on which coco-nut palms are grown, which bring in a small but quite comfortable sum.

The standard of life is comparatively high. Among the richer classes it is fairly decent, even according to the higher material standards of Europe, while, among the poorer classes, it never comes anywhere near the uncleanness, the misery, the unrefined and uncultured barbarism which is the atmosphere of the slum life of the big cities of Europe. Poverty is less disreputable than in civilised communities, and the difference this makes is immense. The peculiarly civilised idea that success is the criterion of intrinsic merit, and that, consequently, failure by itself proves that it was deserved, is almost totally unheard of among the Nāyars. The fact that the individual members of a family have to pool their abilities and, to some extent, their personal incomes, prevents the sharp distinction between the rich and the poor which is so characteristic of societies organised on an individual basis.

Food.—The Nāyars are not vegetarians. Like all Hindus, they do not eat beef, but nothing else is prohibited. Fish is a favourite article of food, and there is an old couplet which sings :

" *Katal vāzhakkā Kari yuntoru vaka
Bhata Bhojana matu Kootātilā.*"

" Then there is a kind of banana of the seas (fish)
And the Nāyars cannot live without it."

There is another couplet, which says :

" There is nothing among the various kinds of food which equals the flesh
of a boar."

The Nāyars are great epicures and they cook beautifully. Rice, of course, is the staple food, but milk curds, butter and *ghee* are things of equal importance.

Most Nāyar families have three meals a day. The breakfast, among the poor people, consists of rice boiled with water in the form of a pudding. With it is taken as relishes pickles, fried fish, cooked vegetables, etc. The next meal is at noon. The main course, of course, is rice. The first part of it is eaten with butter, boiled peas, and many other relishes. The second course is fish, vegetables, etc., mixed with rice. The third part is eaten with buttermilk, mangoes, and pickles. The supper at night is also a meal of which rice is the chief part. The thing about it is that, though the main course is the same as porridge among the Scotch, the variety, as well as the taste, of the subsidiary dishes is what makes all the difference.

Clothing.—The typical Nāyar (male) clothing is the *Mundu*. This is generally 2½ yards long, 1½ yards broad, cloth of fine texture made at Eraniyal, in South Travancore. Nowadays, people wear cotton cloth from Lancashire, while the

richer classes go in for Benares silk. This is wound round the loins and extends to the feet. The upper part of the body is seldom covered by the commoner folk, though most of them carry a second piece of cloth with them. Among the titled classes of the Nāyars it is customary to put on a long piece of laced muslin on the upper part of their body.

Mostly the Nāyars go barefoot, though expensive and elaborately-made sandals are used by the richer classes.

Scents, Flowers, etc.—The Nāyars use a lot of scented things. Sandal-wood paste, which has a beautiful aroma, is generally used on various parts of the body. Musk is also used, generally by ladies. Jasmine is the favourite flower. It is worn in clusters by women in their hair. It is very difficult to find an old Nāyar house which has not got a jasmine plant in its garden. Its scent is delightful, and when strung together as a garland it makes the most delightful, as well as the most welcome, present to a lady. Jasmine is also strewn in the bridal bed.

Household Utensils.—Household utensils, plates, pots, etc., are mostly made of bronze. Very few Nāyar families have got what is spoken of as household silver. The material they use is generally made with great taste, but the praise for this does not belong to them. The workers in bronze are hereditary craftsmen. Their life is devoted to designing and making these things, and naturally they have acquired great efficiency in it. The only praise that the Nāyars deserve for using them lies in the fact that, in spite of a strong temptation to go in for aluminium ware, which is much cheaper, they persist in using the costly, but better made and more artistic bronze things.

What is the future of this people? Will they become patrilineal and merge into the vast ocean of Hindu population, or will they remain matrilineal, while adjusting their social relationships and economic organisations to suit the changing conditions of life in India? Will they break up their *Tharavad* (the joint family) and abandon the primitive system of classificatory relationship? These are questions difficult to answer, but some new tendencies may here be noticed.

One thing I must say to start with. There is no chance of the system of matriliney undergoing any fundamental change in Malabar. The reason for this is twofold. Firstly, the economic interest is too large to submit to any change in the order of things dictated by purely theoretical reasons. Even if we could establish that the patrilineal system of life is superior to the matrilineal, the change from the latter to the former would not take place in Malabar, because it would mean a social revolution of some magnitude. Secondly, as long as there is the Brahmin marriage system it is not only the Nāyars that are interested in its upkeep, but also the Nampudiris.

Another reason is this. There is in Malabar what may be called a strong caste war. There is first of all the Nampudiri class, mostly landlords with great social and religious influence. Their rivalry is not of great importance. There are, then, the Nāyars. Thirdly, we have the Syrian Christians, who are an extremely intelli-

gent, persevering, and prosperous community. Fourthly, there are the foreign Brahmins, who are chiefly usurers, making money by lending at a fabulous high rate of interest and buying up property. Now, the *Tharawal* (or the joint undivided family) system gives the Nāyars a great advantage. Their capital is strategically massed, so to say, and while the property of a family is joined together its credit is much more than it would be if it were divided between the various members. Intelligent Nāyars see the advantage of this position, and are loth to break up what is most certainly an effective economic organisation.

The tendencies of change that are visible are mainly the following :

There is, first of all, a distinct process of change from the *matrilocal* to the *patrilocal* system. This is at present confined to a few of the English-educated families. The officials and those in learned professions have their wives and children staying with them, and this has most certainly set up a new current of opinion. The tendency among these people has been to change the matrilocal matriliney into patrilocal. The older families still look with disapproval on this, and it has not progressed very much; except among a few ultra-moderns. Even in orthodox families the women were allowed for a few months every year to go and stay with their husband's people. Now, by the Nāyar Regulation Act (1912) of Travancore, the husband is given the right to demand that his wife should come and stay with him. Of course, it is open to the *Karnavan* to prohibit this, but in such a case the husband can divorce his wife immediately. Therefore we may safely predict a definite change to a patrilocal system among the English-educated classes of Nāyars.

But whether this would contribute towards a change from matrilineal to patrilineal system is a question more difficult to answer. On the whole I am inclined to answer it in the negative. But for the economic competition of other communities, the Nāyars would certainly have partitioned their estates and started on a patrilineal existence. But now it is too late. The economic interest involved is so vast, the number of people to be affected by it so great, the change in itself so revolutionary, that it is, for a long time at least, beyond the scope of either legislative or administrative action. It would, indeed, be very interesting to watch the line of evolution which such a community, placed as it is between the close and powerful oligarchy of the Nampudiri Brahmins, and the no less powerful and at present unquestionably more aggressive Syrian Christians, would take. The next quarter of a century will probably solve the problem. What the solution will be it is impossible for us to say; that it will not for a long long time, at least, be real patriliney, I can prophesy; the rest time alone can answer.

APPENDIX.

Note No. 1.—The Origin of the word "Nāyars."

There are many reasons to believe that the term Nāyar is a corrupted form of the word *Nagar* or "serpent-men." The generally accepted derivation of the word

is from the Sanskrit word *Nayaka*, meaning leader. As such a derivation flatters the national vanity of the community it has been accepted without question. The utter absurdity of the idea that the people who call themselves Aryans (as the Brahmins of Malabar still do) and look down upon the rest from a point of view of racial superiority, can have given them this proud title, never seems to have suggested itself. Moreover, the Aryan settlers of Malabar asserted a spiritual as well as temporal superiority over the Nāyars, which goes far to disprove the theory of the derivation of the word from *Nayaka*, or Lord.

It seems unquestionable, on the other hand, that the word *Nāyar* is the same as *Nagar*. As the totem names seem to have been imposed on the community from outside it seems reasonable to suppose that this serpent-worshipping people were called by their neighbours *Nagar* or serpent-men. That the Nāyars in ancient days were a totemic clan, is easy to see from the fact that every Nāyar family still holds the serpent sacred. Thus it will not cut down a *Kavu*, or serpent grove, as it is the place where the family serpents reside. It is, of course, natural that in a community of 3½ million souls the same solidarity of totemic feeling, as it exists, say, among the turtle clan, cannot have existed.

M. S. Reinach, in defining totemism as distinct from fetishism, says that the totem is a class of objects regarded by a tribe or clan as tutelary or protective in the widest sense of the word. Take the case of a clan with a serpent totem; the members will call themselves serpents, claim descent from a serpent, abstain from killing serpents, etc. Not only do the Nāyars still show traces of having done all this, but they continue to perform with undiminished zeal *Nagathān* (*thān* is an honorific suffix) *pattus*, or prayers and songs, to the sacred serpents. When anything goes wrong the astrologer generally finds something done to offend the sacred serpents. There is one singular case where a man, without heeding the warnings of all his people, went and cleared a serpent grove, and the result was that he died six days later. In popular opinion, this was without doubt due to the wrath of the serpents.

From all this it seems quite clear that before the Aryan invasion the Nāyars were a community with a *Naga* or serpent totem. This is supported by evidence from Ceylon also. Ceylon chronicles mention that when the Buddha visited the island for the second time (second century B.C.) he found the northern part peopled by Nagas who were fighting with the Yakshas, or the original inhabitants of the land.¹ This is without doubt an emigration of S. Indian people to Ceylon, probably as a result of Aryan pressure from the North. The descendants of these Nagas of Ceylon, it must be noticed, bear a close similarity to the Nāyars in matters of social life. Among their customs may be specially noticed: (a) the elasticity or rather the slenderness of the marriage tie which permits the discarding, without any disgrace attached to it, of undesirable husbands or wives; (b) the remarriage of such widows

¹ See Parker, *Ancient Ceylon*. London, 1909, p. 16.

and wives with others as a universal national custom; (c) the absence of "Sati."¹

In view of the fact that the Veddas are a strictly monogamous people, the prevalence of this custom in Ceylon can only be attributed to South Indian influence. Existing as it does in almost physical contiguity, it is indubitable that these customs and the Nāyar customs had the same origin. In fact, a Naga community was spread over the whole of South India, and the pressure of Aryan emigration seems gradually to have driven them behind the western Ghats in the case of the Nāyars and beyond the straits in the case of their kindred in Ceylon.

The Laws of Philology also support this view. I am assured by Don de Z. Wickerma Singhe that the change from "g" to "x" (as from Nagar to Nayar) is very commonly met with in Dravidian and Prakistic languages. Apart from the general consonance of this change to the philological rules, Mr. Wickerma Singhe also pointed out to me that in Sinhalese² the Sanskrit word *Nāga* is written and pronounced as *Naya*.

The word *Nāyar*, therefore, is, without a shadow of doubt, the same as the word *Nāgar*, which means serpent-men.

Note 2.—The Nāyars and the Todas.

Dr. Rivers, in his learned and elaborate study of the social conditions of the Todas, makes some interesting comparisons with regard to their customs and some of the survivals in Nāyar social life. Before venturing to criticise some of his deductions I may be allowed to state that his idea of the emigration of the Todas to their present country from Malabar is probably right, though the evidence that he has adduced does not in any way prove it. The following facts which he has not noticed may give some additional weight to this hypothesis. Among the Nāyars the dairy (*Pal-pura*) is considered a thing to be kept *ceremonially pure*. No unclean person may approach it, and even the pollution of a child-birth is considered to be sufficiently strong to preclude those whom it affects from touching things belonging to the *Pal-pura*. It would be an exaggeration to say that the *Pal-pura* is considered sacred, but it is certainly *purer* than any other part of the house. Also the way in which the Todas convert milk into butter-milk is exactly the same as among the Nāyars. These customs with regard to the dairy are prevalent, not only where there is geographical contiguity between the Nāyar-land and the Toda-land, but also in Middle Travancore, which is at least two hundred and fifty miles from the land of the Todas.

Some, however, of the arguments brought forward by Dr. Rivers would not bear critical investigation. For example, he says³: "More important is the custom of

¹ *Ibid.*

² Cf. Wm. Greiger, *Sinhalese Etymology*.

³ Pp. 699-70.

giving a cloth as the essential marriage ceremony . . . Throughout the greater part of the Malabar coast the essential feature of the marriage ceremony is that the man gives a piece of cloth to the woman. The ceremony of the *Sambandham* marriage (among the Nairs) consists in giving a cloth, and various names such as *Muntu Kodukkuka*, *Vastadanum poduvakota*, and *Putamuri* all mean cloth-giving."¹

Now with regard to this "essential feature" of the Nāyar *Sambandham*, it may be useful to remember that cloth-giving as a name for marriage did not exist in the earlier half of the eighteenth century. The poet Kunchan Nampiyar, in his works (thirty-two of which are directly or indirectly descriptive of Nāyar life) uses the word "cloth-giving" for *Sambandham* only once:

"Penninu Putava Kotultihennullathumunnikkittan Potti paranju"
"Patrachaictam."

This "essential feature," therefore, is most certainly a development of the later half of the eighteenth century. It is, as a matter of fact, only within the last fifty years that cloth-giving as a synonym for marriage has come to be used widely, and even now it is used mostly by the ultra-refined, who consider it improper to utter the name of marriage in company. Therefore, to say that the Todas emigrated from the Malabar coast because of similarity in custom which, among the Nāyars at least, is a very late development, does not carry conviction.

Again, Dr. Rivers sees a "possible link" between Malabar and the Todas in the word *Pul-palu*² of the Todas and the ceremony of *Puli Kudi* of the Nāyars. Because of the similarity in these words, Dr. Rivers has suggested³ "the name *Pulipal* may mean tamarind dairy and be a survival of community between the Toda ceremony and that of Malabar." This is a supreme example of the danger of drawing conclusions from questionable etymological premises. Now *Puli* is a well-known Dravidian word which means both the tamarind tree and the sour taste. It is also used as a verb, in which case it means to make anything sour. Now *pul-poli* does not mean tamarind dairy, but the dairy of sour milk. How this could be a link "between Malabar and the Todas" it is utterly impossible for me to see.

Dr. Rivers has enumerated a number of points in which he sees "a close resemblance between the customs of the peoples of Malabar and the customs of the Todas." But I would submit that all his points in which any similarity could be seen are Dravidian customs belonging not only to the peoples of Malabar but to the rest of the non-Aryan peoples of South India. Therefore the arguments Dr. Rivers has brought forward prove only that the Todas are a Dravidian people. They do not prove that there was any connection, other than that of neighbours, between the Nāyars and the Todas.

¹ Except the last, which means cloth-cutting.

² Pp. 701-2.

³ P. 702.

Note 3.—McLennan and the Nāyar Type of Polyandry.

McLennan, in his well-known book, *Studies in Ancient History*, divides polyandry into two classes, and calls one the Nair type and the other the Tibetan type. "It is in the nature of the cases," says he, "that all the possible forms of polyandry must lie between the Nair and Tibetan forms." A good deal of what McLennan says about the Nāyar customs is vitiated by the unsatisfactory character of the information at his disposal. Buchanan, on whom he chiefly depends, made a journey through Malabar, and his account is wholly untrustworthy. The loose character of the sexual tie and the licentious habits of the richer Nampudiri landlords, as far as their immediate Nāyar tenants were concerned, were naturally enough interpreted as polyandry by foreign observers. As a matter of fact distinct polyandry of any type was very rare in Malabar except among the Kāniyāns (or the astrological caste) and among them it is of the Tibetan type.

If there existed any tendency towards polyandry among the Nāyars it was not certainly towards what McLennan calls the "Nair type." The wife of a brother is looked upon as a person to whom one could openly though not legitimately pay court; and any favour short of sexual relationship which she confers upon him is allowed by public opinion. A wife, for example, is the only woman who is allowed to smear oil on a man's back; and when a woman does it to a man it is considered to be a sort of semi-marital function. A man can always ask his brother's wife to do it for him, and it is done very often, even in the presence of the brother. Such customs are, however, open to two interpretations. As we have seen elsewhere, the *Machuna* marriage (or the marriage of cross-cousin) is the orthodox form of marriage among the Nāyars. To all the brothers alike the girl stands in the same relation before the marriage. *She could have been, in fact, the wife of any of them*, provided she was not older than her cousins. Even after her marriage with one of them this potential relationship continues to exist, and therefore all the brothers treat her "half as a sister and half as a wife."¹

Or, it may be explained, that such relationship is a survival of a Tibetan type of polyandry among the Nāyars. It may be argued that these semi-marital functions which all the brothers can claim from each others' wives, prove the prevalence in a former time of a community of marriage relationship among the brothers. This does not seem to me to be true. Nāyar tradition gives no support to this view. We have no Nāyar stories that speak of one woman who was the common wife of her cross-cousins. In fact we have no tradition of any polyandry at all. Nevertheless, we find McLennan giving the Nair name to a particular type of polyandry supposed by him to be practised universally among them.

¹ It has been argued by Spencer and Gillen that the system of supplementary spouses affords definite evidence of a system of group marriage in a previous age. Their inferences on this subject have now been subjected to very damaging criticism, especially by Mr. N. W. Thomas, *Kinship and Marriage in Australia*, pp. 111-141.

MISCELLANEA.

PROCEEDINGS OF THE ROYAL ANTHROPOLOGICAL INSTITUTE, 1918.

January 28th, 1919.

Annual General Meeting. (See p. 1.)

March 12th, 1918.

Ordinary Meeting (Joint Meeting with the Prehistoric Society of East Anglia), at 50, Great Russell Street.

The afternoon programme was arranged by the Prehistoric Society of East Anglia, when the President, Mr. REGINALD SMITH, gave his Presidential Address on "Our Neighbours in the Neolithic Period."

A demonstration of Specimens from Grime's Graves was given by Dr. PEAKE.

At the Evening Meeting, Sir HERCULES READ, President of the Institute, was in the Chair.

The minutes of the last meeting were read and confirmed.

The election of the following as Ordinary Fellows of the Institute was announced: Mr. A. M. Gunnell, Mr. E. R. Taylor, Mr. Percy R. Hough-Love, Mr. W. H. Norman, and Miss Hilda Lake.

Mr. H. J. E. PEAKE gave his address on "The Age of Some Megalithic Structures in the Mediterranean Area."

The paper was discussed by Mr. A. L. LEWIS, Mr. R. A. SMITH, and the PRESIDENT, and Mr. PEAKE replied.

The best thanks of the meeting were accorded to Mr. PEAKE for his interesting address.

Mr. A. L. LEWIS gave a demonstration of Flint Implements found on the surface at Beddington, Carshalton, and Wallington, Surrey, and observations were made by Mr. R. A. SMITH, Mr. ROBERTS, and the PRESIDENT, and the thanks of the meeting were accorded to Mr. LEWIS.

October 29th, 1918.

Ordinary Meeting at 50, Great Russell Street. Sir HERCULES READ, President, in the Chair.

The minutes of the last meeting were read and confirmed.

The election of the following as Ordinary Fellows of the Institute was announced: Mr. R. C. E. Long, Capt. R. D. MacGregor, Mr. Nathaniel F. Roberts, Lieut. W. Lyttle, Dr. A. E. Peake, Major W. Rathbone, Mrs. T. W. Jenkinson, Miss Rosalind L. B. Moss, Mr. G. W. Smallwood, Mr. R. Steele, Lt.-Col. R. T. McHugh, Capt. G. W. Clark.

Mr. REGINALD SMITH exhibited and described :—

(i) Stone Implements and "Tortoise Cores" collected by Resident Magistrate F. J. Jansen at Victoria West, Cape of Good Hope.

(ii) Implements of Neolithic Types from Narkaru, Bauchi Plateau, Nigeria, exhibited by Mr. G. W. Lamplugh, P.G.S.

(iii) Specimens of a series of Stone Implements collected by Capt. C. W. Cunningham, near Siwa, Libyan Desert.

The paper and exhibits were discussed by Mr. LAMPLUGH, Mr. HENRY BALFOUR, Sir HENRY HOWORTH, and Mr. REGINALD SMITH replied.

The PRESIDENT made observations on various aspects of the questions under discussion, and the thanks of the meeting were accorded to Mr. SMITH and to the gentlemen by whom the specimens were collected.

The Institute then adjourned until November 29th.

November 29th, 1918.

Ordinary Meeting. At 50, Great Russell Street. Professor KEITH, Past President, in the Chair.

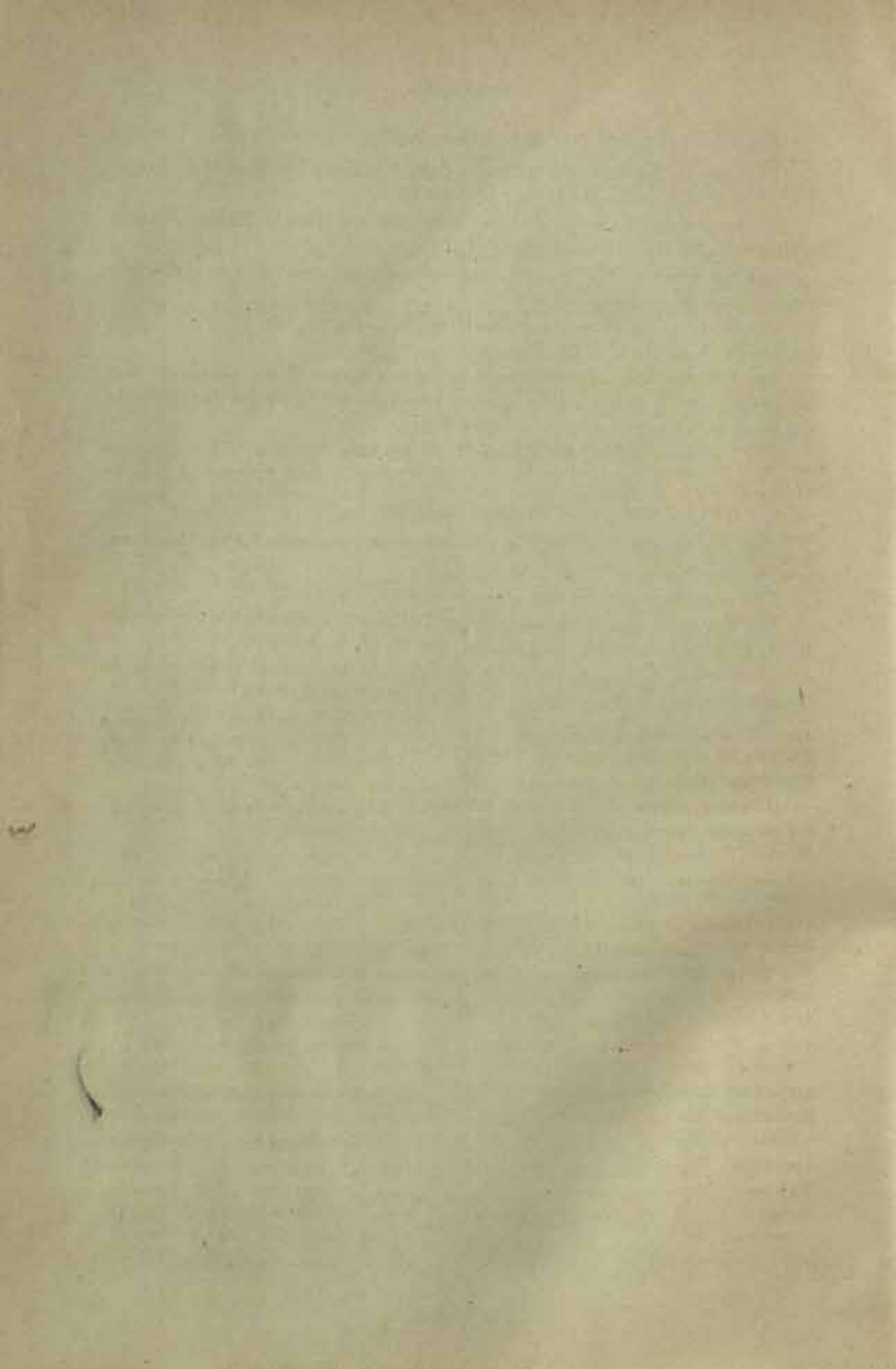
The minutes of the last meeting were read and confirmed.

The election of the following as Ordinary Fellows of the Institute was announced : Mr. J. A. Bullbrook, Mr. K. M. Panikkar, and Mr. H. N. Wright.

Professor F. J. PARSONS gave his address, "Anthropological Observations on German Prisoners of War," illustrated by maps and tables.

The paper was discussed by the CHAIRMAN, Dr. SHRUBSALL, Mr. HAROLD PEAKE, Dr. BROWNLEE, Capt. GARSON, Capt. LE GROS CLARKE, and Professor PARSONS replied.

The very sincere thanks of the meeting were accorded to Professor PARSONS for his interesting and important contribution to Anthropology.



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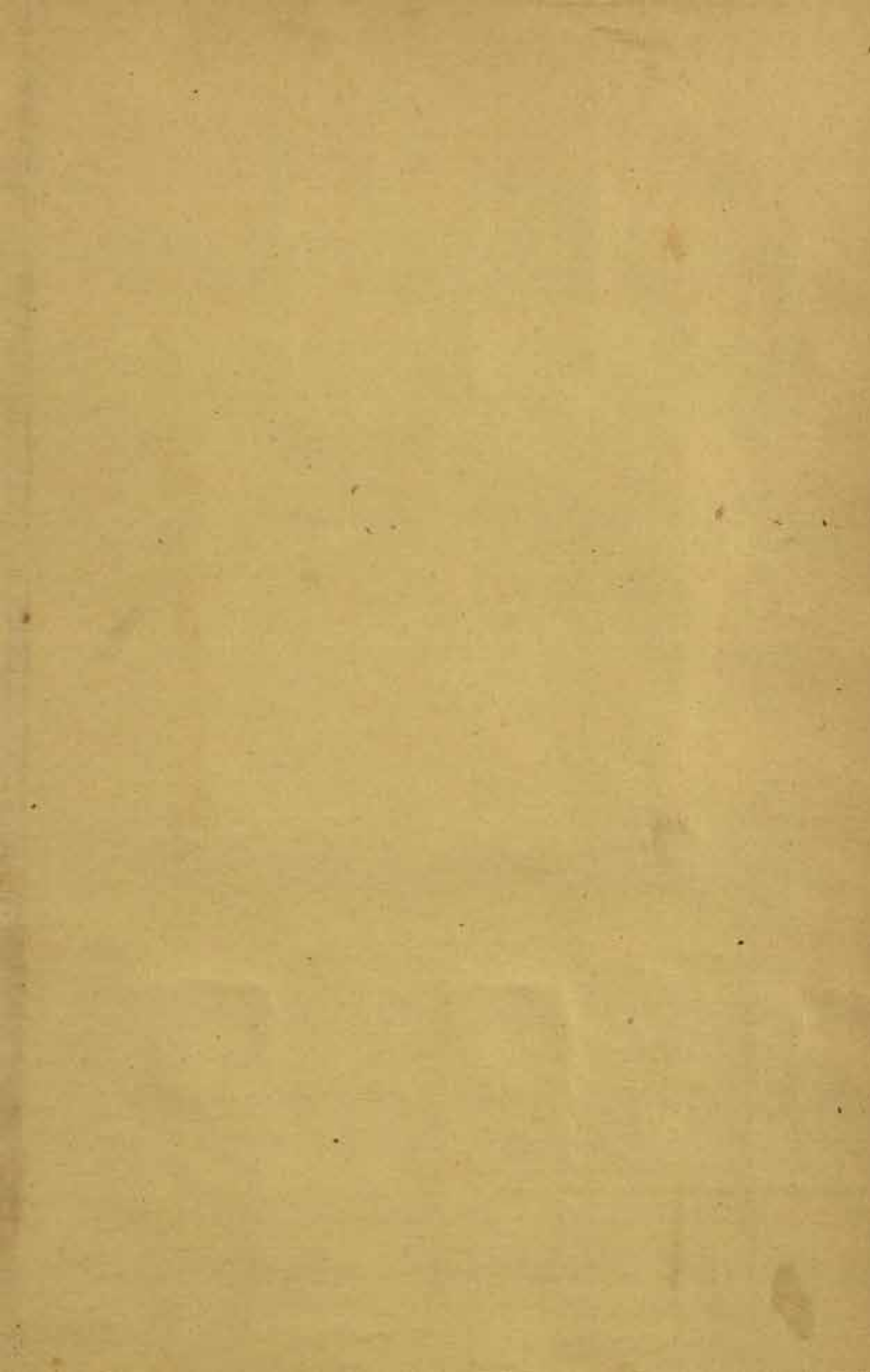
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